Chapter #8

SELF-ASSESSMENT THROUGH THE METACOGNITIVE AWARENESS PROCESS IN READING COMPREHENSION

Katerina Kasimatis[1] & Theodora Papageorgiou[2]
[1]Associate Professor
[2]Lab. Teacher
School of Pedagogical and Technological Education (ASPETE), Department of Education, Greece

ABSTRACT
This study aims to investigate the relationship between adult self-assessment and the level of metacognitive awareness in reading comprehension. The sample of the research was adults who were participating in a training programme in order to obtain a certification of pedagogical competence during the year 2017-2018. MARSI (Mokhtari & Reichard, 2002) was used as a research tool and open - ended questions were distributed to the trainees. The study focused on the overall index and the metacognitive development of the trainees. Both quantitative and qualitative analysis of the data was conducted. The analysis of the data revealed high level of awareness of metacognitive reading strategies(M> 3.5), which is also in relevance to high quality educational level of the trainees and their age (M = 35). With regard to the effect of the training on their metacognitive awareness, there has been a statistically significant increase in the overall average of MARSI, which indicates the positive impact of the training on a population of high educational level and older than the normal trainee population. The qualitative analysis of the data revealed the enhancement of self-assessment among trainees and the development of reading skills through the use of digital technologies etc. The positive contribution of the training to the participants' metacognitive awareness seems to be focused only on those with pre-existing teaching experience and have been more highly self-assessed.

Keywords: self-assessment, metacognitive awareness, metacognitive skills, reflection, reading skills.

1. INTRODUCTION

Reading is one of the most important factors to enhance students' learning. Learners must know how they can comprehend the text effectively by using a variety of reading strategies (Iwai, 2016). Academic and technical courses demand substantial readings, so there is a need for learners to be able to comprehend what they read in order to succeed in their academic life and beyond. According to Paris, Lipso and Wixson (1983); Westby (2004), more proficient readers employ many different reading strategies, such as guessing, identifying main ideas, and focusing on text structures, while less proficient readers use fewer reading strategies.

Baker and Brown (1984) recognized the important role of metacognition in understanding the content of a text by storing information in memory. Cross and Paris (1988) highlighted the important role of metacognitive monitoring and control in achieving reading comprehension. According to Kolic-Vehovec (2010), metacognitive awareness and reading skill strategies, when developed parallel to the reading ability, can enhance reading comprehension and it could be considered that metacognition can predict levels of reading comprehension.

Flavell (1979) used the term "metacognition" to refer to an individual's awareness of thinking and learning. He provided the following explanation: "Metacognition refers to one's knowledge concerning one's own cognitive processes and products or anything related to them" (p. 232). There are many other definitions, such as "knowledge about knowledge" or "people's knowledge about what they know, remember and think" (Metcalfe & Shimamura, 1994). The prefix "meta" of the word, refers to the process of the second level of knowledge. As a consequence, the cognitive and metacognitive skills get desegregated. Cognitive skills are perception, memory, performance, cognition, language, critical acumen, problem solving, decision making and critical thinking. The metacognitive skills on the other hand, "assist the understanding and awareness of the learning process and regulate the performance in terms of processing and assimilating new knowledge". These are two interrelated processes that cannot be considered as separated parts.

In addition, according to Paris and Winograd (1990) "Metacognition introduces two key-features: Self-assessment and self-management of mind. Self-assessment refers to the theoretical aspect of metacognition, and more explicitly to the personal reflections that people make about their mental states, motives and traits as traumatized. Such reflections refer to "what do I know?. Questions, like 'how do I think?" and "when and how can I apply specific learning strategies?" (Paris &Winograd 1990, p. 17). Self-management refers to the practical form of metacognition, namely the mobilization of the mental processes responsible for the orchestration of various aspects of problem solving process, the alternative designs that we organize before dealing with a work, the adaptations we make while working on the revisions after completing our work (as above p. 18).

Metacognitive reading strategy awareness plays an important role in educational process (Ditzel, 2010; Mytcowicz, Goss & Steinberg, 2014; Ahmadi, Ismail, & Abdulla, 2013). Students who use metacognitive strategies perform better in reading tests and courses (Ahmadi et.al., 2013;Tavakoli, 2014; Magogwe, 2013; Hong-Nam&Page, 2014; Memis & Bozkurt, 2013; Phakiti, 2006; Kummin & Rahman, 2010). Research has shown that positive effects of metacognitive strategies on reading comprehension and performance of students. Specifically, Estacio (2013) argues that the use of the metacognitive reading strategies can predict the reading comprehension test scores. Moreover, Ilustre (2011) claims that metacognitive reading strategies are better predictors of text comprehension and that problem solving strategies are positively correlated with reading comprehension. Another study found that training on the use of metacognitive strategies among low sufficient learners improves reading comprehension and performance (Ismail &Tawalbeh, 2015).

The significant role of a training program has been indicated by Royanto (2012) who examined the effectiveness of an intervention program based on scaffolding to improve metacognitive strategies in reading. She found out that the program activated unused metacognitive strategies, leading to the conclusion that the learners have the metacognition. However, Djudin(2017)found out that few college instructors explicitly teach strategies for monitoring learning. They assume that students have already learned these strategies in high school. However, many are unaware of the metacognitive process and its importance to learning. This study will contribute to covering the gap that there is on adult training in higher education, since most research focuses only on the students' learning strategies in compulsory education.

2. METHOD

The MARSI is designed to provide both an overall indicator of the level of awareness of metacognitive reading strategies and sub-indices on the three categories of strategies: general strategies, problem-solving strategies and support strategies. In this point, it is crucial to be highlighted that, this research focuses only on the overall awareness indicator as well as on the questions which refer to metacognitive development.

Both quantitative and qualitative analysis of the data was conducted. For the quantitative analysis of the data, the variable scales are described using the mean value, while the ordinates are referenced by the MARSI total index. Parameter testing of t-test dependent samples (regularity analysis confirms the use of parametric methods), while the Wilcoxon-sign rank test was applied per question.

The qualitative study was conducted for a better understating of participants' perceptions on investigating trainees' skills. The study maintained a particular interest for the metacognitive skills developed through the trainee participation in the Program. An inductive thematic analysis was conducted on the transcribed data (Creswell, 2000). This approach supplies a frame work for the thematic analysis of qualitative data and provides a way of thinking about how to manage themes and data; this process is likely to reflect the analyst's awareness of recurring ideas and topics in the data (Bryman, 2016: 587).

2.1. Participants

245 adults participated in an education training programme in order to obtain a certification of pedagogical competence during the year 2017-2018 took place in this research.The participants were students' teachers studying in the educational training Programme and holders of higher level education degree of different specialties. More specifically, the trainees were of different specialty, such as Nurses, Civil Engineers, Doctors, Teachers, Lawyers, Economists, Accountants e.t.c. Sixty-two (62) out of them were males and one hundred fifty-one (151) out of them were females. Ten (10) out of them were under 25 years old, one hundred and eight (108) were between 26-35 years old and ninety-six (96) were older than 35 years old. One hundred twenty-one (121) out of them hold an undergraduate degree, whereas one hundred eighteen (119), hold a postgraduate degree and Phd. One hundred and five (105) out of them had pre-existing teaching experience, whereas one hundred thirty-nine (139) didn't have any teaching proficiency.

As far as the education training programme is concerned, it has been operating the last few decades in twelve cities of Greece and it provides the opportunity to the participants to gain a certification of pedagogical competence. It is a programme of pedagogy, theory and practice in which theory is integrating into practice through practical experiences within a contemporary learning environment. There are two semesters in the education training program. All the programme's courses are obligatory for all the participants during their training.

2.2. Instrument

MARSI (Mokhtari & Reichard, 2002) was used as a research tool and open-ended questions were distributed to the trainees. MARSI contains 30 questions and provides an overall indicator of the level of awareness of metacognitive reading strategies as well as individual indicators of metacognitive strategies in reading. A Metacognitive Awareness of Reading Strategies Inventory (MARSI) was translated and validated in Greek student

population (Koulianou, Roussos & Samartzi, in Press). This study focuses on the overall index and the metacognitive development of the trainees. It refers to a selection from a scale in statements related to the relative reading strategy, which took place during the reading process and consists of 30 questions. The self-report tool involves three types of strategies: (a), problem-solving strategies, (b) global, and (c) support. Each of the strategies is associated with one of the three subcategories. Problem Solving Strategies (8 questions), Global Reading Strategies (13 questions), Support Reading Strategies (9 questions).

The questionnaire was completed in two phases during the year 2017-18, in the beginning and at the end of the education training programme. Of these 240 were complete, while in five of them qualitative questions were missing.

2.3. Objective and research questions

The scope of this study was to investigate the evolution of awareness of metacognitive reading strategies among learners of an education training programme in the School of Pedagogical and Technological Education (ASPETE) in Greece. More specifically, this research investigates the relationship between adult self-assessment and the level of metacognitive awareness in reading comprehension.

- What is the level of metacognitive awareness in reading comprehension of the trainees and how does this evolve during their participation in the training programme?
- How does the existing teaching experience of students affect the development of metacognitive awareness in reading comprehension?
- What is the relationship between development of the metacognitive awareness of reading strategies and self-assessment?

3. RESULTS

As far as the gender is concerned, the number of men is 62 and the number of women is 151. Regarding the age: 4.7% of students / students are under 25, 50.5%, among 26 -35 years, 44.9% is over35 years old. As far as the level of education is concerned, 50.4% are graduates without postgraduate studies, while 49.6% have a Master's degree and PhD.

Regarding the level of metacognitive awareness in reading comprehension of the trainees and how this evolves during their participation in the training programme, the statistical analysis of the data revealed the high level of awareness of metacognitive reading strategies (about 70% of students were indicated at a high level, ie M> 3,5), which is consistent with the high educational level of the trainees (49, 6% holders of postgraduate / doctoral degrees), as well with the age of the trainees (M = 35, SD = 7).

More specifically, seven questions out of them have median '3' (ie, 'I do this sometimes (about 50% of the times)'). In twenty-three out of thirty questions, the trainees stated '4' or '5', (ie 'I usually do this' and I always or almost always do that'.) Three questions were statistically significant at a median of '4', revealing the positive effect of the programme. In two other questions, although the median did not change, there was a statistically significant improvement.

Table 1.
The evolution of metacognitive awareness in reading comprehension during the training programme.

	Median (at the beginning)	Median (in the end)	P
15. I use reference materials such as dictionaries to help me understand what I am reading.	3.00	3.00	0,002
6. I write summaries to reflect on key ideas in the text.	3.00	**4.00**	<0,001
9. I discuss my reading with others to check my understanding.	3.00	3.00	0,068
28. I ask myself questions I like to have answered in the text.	3.00	3.00	0,037
17. I use tables, figures, and pictures in the text to increase my understanding.	3.00	**4.00**	0,002
5.When text becomes difficult, I read aloudto help myself understand what I'm reading.	3.00	**4.00**	0,001
29. I check to see if my guesses about the text are right or wrong.	3.00	3.00	0,288

The specialty of the trainees is related to the negative attitude towards reflection, something that is mentioned particularly in the department of Nurses (a very high percentage did not answer at all and a very high percentage had a negative attitude towards the influence of the questionnaire and the program. It can be stated that, further research needed to investigate the representations of the different specialties regarding reading and metacognitive skills and their contribution to the educational process.

With regard to impact of the teaching experience on the metacognitive experiences of students participating in the program, statistic analysis did not reveal significant statistical differentiation in relation to the studies of the trainees. Of particular interest is the fact that positive differentiation is associated only with those trainees who have teaching experience in educational institutions or in non-formal education.

Figure 1.
Evolution of MARSI.

As far as the impact of the training programme on the metacognitive awareness of trainees is concerned, there has been a statistically significant increase in the overall average of MARSI, which indicates the positive impact of the training on a population of high educational level and of relatively older age than the normal trainee population. More specifically, although the level did not statistically significantly change [Mdnpre = 3.0, Mdnpost = 3.0 (where '3' = high), z = -0.536, P = 0.607) there was a statistically significant increase in the total mean MARSI [Mpre = 3.62, Mpost = 3.75 (in the range 1 to 5), t (243) = - 2.507, P = 0.013].

The qualitative analysis of the open-ended questions showed the enhancement of self-assessment among trainees as a dominant metacognitive skill, and significant conclusions were drawn regarding reading skills through the use of digital technologies, the way of study, the link between theory and practice, etc. It is of most importance the fact that the positive contribution of the training process to the metacognitive awareness of the participants appears to be focused only on those with pre-existing teaching experience in educational structures that seem to have been more highly self-assessed.

Regarding the correlation of the improvement of reading skills with the use of digital technologies there is a positive correlation between the reading skills in comprehension during the implementation of the program and digital technologies. There was a variety in the terms that they used to describe digital technologies such as: technologies, internet, computer, website, Wikipedia. Negative correlation between specialty and digital technologies is noted only in departments of Nurses and Electrical Engineers, where there was not any mention of digital technologies at all.

According to the participants' responses, it can be claimed that trainees did not seem to be conscious in most cases of the fact that their negative attitude towards the questionnaire is a metacognitive process: "I was not influenced by the way of studying during the training program. The way of studying hasn't been changed since I was student". The programme has influenced my way of thinking, I have become tolerant; Nevertheless it did not affect my way of studying".

Regarding the way of studying, it can be considered that the development of the metacognitive awareness changed their way of studying: "Certainly it helped me understand some actions that I do unintentionally" "I will try to abolish the bad habit I have when I do not understand the meaning of a text, abandoning any effort. Now, I will insist on trying to understand the meaning." It can be claimed that the trainees learned how to apply the appropriate reading strategies effectively. It demonstrates the perceived acquisition of conditional knowledge, which is an important element in reading performance (Iwai, 2016).

Moreover, the trainees learned to link theory with practice: "I was more focused on how the theory is integrated into practice and I gained a more critical judgment on the content of all the modules I have been taught." "I believe that things I made unintentionally, now I am able to put them in order and I will use some helpful ways of studying more consciously."

The answers of the participants revealed the fact that although they used to employ self - reflective processes when reading they didn't know the terminology of them. "I didn't change my way of studying because I think it is effective. They only new thing I acquired from the programme is the fact that I learned the terminology."

The answers of participants, also, revealed the important role of metacognitive awareness in real life and in professional development. "I manage my time better; I do not postpone things for later. I will try to be more organizational and not postpone things in

the future". "I stated to read having a specific goal in my mind and identifying the elements that were important for me as a student as well as a professional".

As far as the importance of metacognition is concerned, a trainee leads to an epistemological and ontological assumption of great importance for education that "everything around us is Knowledge". "I learned to read using keywords. In the second semester I was helped to understand that everything around me is knowledge".

The trainee acquires a metacognitive awareness of the importance of associations, understanding the way we establish new knowledge in long-term memory, a basic pedagogical and theoretical assumption of the processes that we use in order to learn. "I have been collaborating to remember what I am reading and to understand in depth the meaning of the text".

4. DISCUSSION

The qualitative analysis of trainees' response data revealed that the trainees developed metacognitive skills in reading comprehension. More specifically, the trainees learned to monitor and control the Knowledge, something which is in accordance with Cross and Paris (1988), who have highlighted the important role of metacognitive monitoring and control in reading comprehension. The findings of the study are in contrast with other studies in which readers (typically young developing readers and some inexperienced adolescents and adults) have lower metacognitive knowledge about reading (Paris &Winograd, 1990). They do relatively little monitoring of their own memory, comprehension and other cognitive tasks (Flavell, 1979; Markman, 1979) and tend to focus on reading as a decoding process rather than as a meaning-getting process (Baker & Brown, 1984).

From the analysis of the data, it seems that the trainees who participated in the programme belong to the skilled readers. Although they did employ self - reflective processes and metacognitive strategies in reading, in many cases they did not know their terminology. Skilled readers, according to Snow, Burns, and Griffin (1998), are good comprehends. They differ from unskilled readers in "their use of general world knowledge to comprehend text literally as well as to draw valid inferences from texts, in their comprehension of words, and when using monitoring and repair strategies" (p. 62).

In addition, the trainees stressed out the importance of metacognition awareness for their life and their professional development. They developed metacognitive skills, as reflected in their responses to the transfer of knowledge to their future lives and similar situations. The trainees of the programme belong to independent readers. On the contrary, according to Djudin (2017) novice learners do not make connections or see the relevance of the material in their lives. Furthermore, they developed the ability to dedicate their time to learning, autonomy, discipline, perseverance and information management in the learning process, which are basic skills in the Deusto model (Olalla, Mora, Paredes, Otero, Ildefonso, Ruiz, Eizaguirre &Sɑnchez, 2008), as well as in the Binkley et.al. model (2012).

According to the theory of Rosenblatt (1992: 8-9) which refers to literary experience, reading experience is described as a kind of intense personal activity, a means of personal exploration, of nature, of mental and emotional abilities, of the outside world, as well as alternative ways of life.

Regarding the correlation of the reading skills with the use of digital technologies the findings revealed the improvement of reading skills during the implementation of the program with the use of the digital technologies. More specifically, in terms of computer use, they developed skills related to the use of text as well as other more specialized

software and they realized the correlation between reading skills in comprehension and digital technologies, which are basic in the Deusto model (Olalla et.al., 2008).

In Greece the MARSI has been used in teenagers with or without learning difficulties, with satisfactory validity and reliability (Koulianou et.al., in Press). In this study, the innovation lies in the fact that the MARSI was used in a population of adults with particular characteristics. Finally, they approached a higher level of reading comprehension during the implementation of the program and they developed critical thinking, as their answers revealed. They were aware of what they were reading and they seemed to know the reason for reading. They had tentative plans or strategies for handling the problems they came up with as well as for monitoring their comprehension of textual information (Pressley & Afflerbach, 1995).

More specifically, this study argues that the trainees increased awareness of their own reading strategies. They were able to evaluate themselves and to amend the conceptions they hold about reading and learning from text. Becoming aware of their cognitive processes while reading is a first important step toward achieving the type of constructively responsive and thoughtful reading, that is emphasized by current models of reading (Mokhtari & Reichard, 2002).

According to Paris and Winograd (1990), such "consciousness-raising" has two benefits: "(a) it transfers responsibility for monitoring learning from teachers to trainees themselves, and (b) it promotes positive self-perceptions and motivation among trainees. In this manner, metacognition provides personal insights into one's own thinking and fosters independent learning" (p. 15).

5. CONCLUSION / FUTURE RESEARCH DIRECTIONS

The research focused on trainees' use and awareness of metacognitive reading strategies in the education training programme. Therefore, there was no significant difference between them regarding the studies, the results showed significant differences regarding the pre-existing teaching experience. The trainees who had pre-existing teaching experience in education structures could apply what they learned from the course.

It could be explained by the fact that the trainees with pre-existing teaching experience (mostly teachers) might have been more familiar with specific names of reading strategies and might have had better knowledge of these strategies than the ones with no pre-existing teaching experience. In addition, teachers were also in their field of expertise, where they could apply what they have studied and what they have learned from the course during the training program. On the other hand, the participants of different specialties (Lawyers, doctors, Nurses, Economists e.t.c) in the education programme had just started to learn literacy in general and they did not have a lot of knowledge of reading strategies.

In general, the qualitative analysis of open self-assessment questions revealed the enhancement of self-assessment as the most important metacognitive skill. It is vital the fact that the positive contribution of the training program to the metacognitive awareness of the participants appears to be focused only on those with pre-existing teaching experience in education structures that seem to have had themselves more highly self-assessed.

Reading strategies improve reading comprehension and lead to fluent reading. For this reason they can be taught to less proficient readers and can be integrated into training programs. In this case, it is proposed to enrich such training actions with more self-assessment practices and techniques, when designing and implementing them in order to contribute to a further improvement of the metacognitive awareness of all the participants. An analysis of the level of each different cognitive specialty is also proposed.

Finally, the need to further explore the representations of the different specialties for reading and metacognitive skills and their contribution to the educational process is also pointed out.

It should be mentioned that the role of the educators is very important as they should educate their trainees on these metacognitive strategies in reading comprehension during the period of the programme. Trainees must get used to connecting new information to former knowledge, to monitoring and evaluating the thinking processes, in order to enhance their metacognitive skills.

REFERENCES

Ahmadi, R. A., Ismail, H. N., & Abdullah, M. K. (2013). The importance of metacognitive reading strategy awareness in reading comprehension. *English Language Teaching, 6*(10), 235-249.doi.org/10.5539/elt.v6n10p23

Baker, L., & Brown, A. L. (1984). Metacognitive skills and reading. In P. D. Pearson, R. Barr, M. L.Kamil, & P. Mosenthal, *Handbook of reading research* (pp. 353 - 394). New York, NJ: Longman.

Binkley, M., Erstad, O., Herman, J., Raizen, S., Ripley, M., Miller-Ricci, M., Rumble, M. (2012). Defining Twenty-First Century Skills. In B. McGaw & E. Care (Eds), *Assessment and Teaching of 21st Century Skills* (pp 17-66). New York, NY: Springer.

Bryman, A. (2016). *Social Research Methods*. Oxford: Online Research Centre.

Creswell, J. W. (2013). *Research Design. Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, CA:Sage.doi.org/10.1016/j.math.2010.09.003

Cross, D. R., & Paris, S. G. (1988). Developmental an instructional analysis of children's metacognition and reading comprehension. *Journal of Educational Psychology, 80*(2), 131-142.doi:10.1037/0022-0663.80.2.131

Ditzel, S. N. (2010). Metacognitive reading strategies can improve self-regulation. *Journal of College Reading and Learning, 40*(2), 45-63. doi.org/10.1080/10790195.2010.10850330

Djudin, T. (2017). Using Metacognitive Strategies to Improve Reading Comprehension and Solve a Word Problem. *Journal of Education, Teaching and Learning, 2*(1), 124-129.

Estacio,M.J. M.(2013).Bilingual readers' metacognitive strategies as predictors of reading comprehension.*Philippine ESL Journal, 10*, 179-199.

Flavell, J. H. (1976). Metacognitive aspects of problem solving. In L. B. Resnick (Ed.), The nature of intelligence (pp. 231-235). Hillsdale, NJ: Lawrence Erlbaum.

Hong-Nam, K. & Page, L. (2014). ELL high school students' metacognitive awareness of reading strategy use and reading proficiency. Teaching English as a Second or Foreign Language: *The Electronic Journal forEnglish as a Second Language,18*(1). Retrieved from http://www.tesl-ej.org/wordpress/issues/volume18/ej69/ej69a4/

Ilustre, C. A. (2011). Beliefs about reading, metacognitive reading strategies and text comprehension amongcollege students in a private university. *Philippine ESL Journal, 7,* 28-47.

Ismail, N. M., &Tawalbeh, T. I. (2015). Effectiveness of a metacognitive reading strategies program for improving low achieving EFL readers. *International Education Studies, 8*(1), 71-81.

Iwai, Y. (2016). Promoting strategic readers: Insights of preservice teachers' understanding of metacognitive reading strategies. *International Journal for the Scholarship of Teaching and Learning, 10*(1), 1-7.doi.org/10.20429/ijsotl.2016.100104

Kolic-Vehovec, S., (2010). Self-monitoring and attribution training with poor readers. *Studia Psychological, 44*(1), 57-68.

Koulianou. M., Roussos, P., Samartzi S. (in Press). Metacognitive Reading Strategies: Greek adaptation of the MARSI and a comparative study of adolescent students with and without special learning difficulties. *Psychology*.

Kummin, S., & Rahman, S. (2010). The relationship between the use of metacognitive strategies and achievement in English. *Procedia - Social and Behavioral Sciences, 7*, 145-150.doi.org/10.1016/j.sbspro.2010.10.021

Magogwe, J. M. (2013). Metacognitive awareness of reading strategies of University of Botswana English as a second language students of different academic reading proficiencies. *Reading and Writing, 4*(1), 1-8.doi.org/10.4102/rw.v4i1.29

Markman, E. M. (1979). Realizing that you don't understand: Elementary school children's awareness of inconsistencies. *Child Development, 50*(3),634-655.

Memis, A. & Bozkurt, M. (2013). The relationship of reading comprehension success with metacognitive awareness, motivation, and reading levels of fifth grade students. *Global Journal of Educational Foundation, 1*(1), 034-038

Metcalfe, J., & Shimamura, A. P. (Eds.). (1994). *Metacognition: Knowing about knowing*. The MIT Press.

Mokhtari, K., & Reichard, C. (2002). Assessing students' metacognitive awareness of reading strategies. *Journal of Educational Psychology, 94*(2), 249-259.

Mytcowicz, P., Goss, D., & Steinberg, B. (2014). Assessing metacognition as a learning outcome in a postsecondary strategic learning course. *Journal of Postsecondary Education and Disability, 27*(1), 51-62.

Olalla A., Mora G., Paredes J., Otero J., Ildefonso I., Ruiz M., Eizaguirre J., Sɑnchez A., (2008), *Competence-based learning. A proposal for the assessment of generic competences*, Spain: University of Deusto

Paris, S. G., & Winograd, P. (1990). How metacognition can promote academic learning and instruction. In B. F. Jones & L. Idol (Eds.), *Dimensions of thinking and cognitive instruction* (pp. 15-51). Hillsdale, NJ, US: Lawrence Erlbaum Associates, Inc.

Paris, S., Lipson, M., & Wixson, K. (1983). Becoming a strategic reader. *Contemporary Educational Psychology, 8*(3),293-316.

Phakiti, A. (2006). Modeling cognitive and metacognitive strategies and their relationships to EFL reading test performance. *Melbourne Papers in Language Testing, 1*, 53-95.

Pressley, M., & Afflerbach, P. (1995). *Verbal protocols of reading: The nature of constructively responsive reading*. Hillsdale, NJ: Erlbaum.

Royanto, L. (2012). The effect of an intervention program based on scaffolding to improve metacognitive strategies in reading: A study of year 3 elementary school students in Jakarta. *Procedia: social and Behavioral Sciences, 69*, 1601-1906. https://doi.org/10.1016/j.sbspro.2012.12.105

Rosenblatt, L. M. (1992). *The Reader, the Text, the Poem: The Transactional Theory of the Literary Work* (2nd ed.). Carbondale: Southern Illinois University Press.

Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children.* Washington, DC: National Academy Press.

Tavakoli, H. (2014). The effectiveness of metacognitive strategy awareness in reading comprehension: The case of Iranian university EFL students. *The Reading Matrix, 14*(2), 314-336.

Westby, C. (2004). A language perspective on executive functioning, metacognition, and self-regulation in reading. In C. A. Stone, E. R. Silliman, B. J. Ehren, & K. Apel (Eds.), *Handbook of language andliteracy: Development and disorders* (pp. 398-427). New York: The Guilford Press.

Zhang, L., &Seepho, S. (2013). Metacognitive strategy use and academic reading achievement: insights from a Chinese context. *Electronic Journal of Foreign Language Teaching, 10*(1), 54-69.

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AUTHORS' INFORMATION

Full name: Katerina Kasimatis
Institutional affiliation: Associate Professor, School of Pedagogical and Technological Education (ASPETE)
Institutional address: Heraklion, Athens, Greece, 141 21
Short biographical sketch: Aikaterini Kasimatis is an Associate Professor at the Department of ASPAITE, in the field of "Theory, Practice and Assessment of Teaching."She teaches "Educational Evaluation", "Teaching Methodology", "Didactics" "Teaching Practice Sessions" to graduate students, undergraduates, students of the Annual Pedagogical Training Program (EPPAIK), newly appointed teachers, teachers and postgraduate teachers, as well as in training seminars for administrators of Education. She is the Scientific Director of the Annual Pedagogical Training Program, Head of "Teaching Practice Sessions", chairman and member of evaluation committees for the evaluation of Scientific and Laboratory Associates in 12 cities EPPAIK of ASPAITE. She has worked as the Scientific Director of Training Programs (1995-2009). She has published in international journals, books and proceedings of international and Greek conferences with judges. She is the author of "Modern Educational Evaluation Forms with the use of ICT (2015) (kallipos, Greek Academic Digital Textbooks). She has edited two books, in the field of "Teaching Methodology" and "Educational Evaluation" (ION, 2009).

Full name: Theodora Papageorgiou
Institutional affiliation: Laboratory Teaching Staff, School of Pedagogical and Technological Education (ASPETE)
Institutional address: Heraklion, Athens, Greece, 141 21
Short biographical sketch: Theodora Papageorgiou holds a degree in Greek Language and Literature, National and Kapodistrian University of Athens and a Master's Degree: "Use of Information and Communication Technology for Didactics", National and Kapodistrian University of Athens, Faculty of Philosophy, Pedagogy and Psychology, Department of Pedagogy. She has worked as a Lab.Teacher in Educational National programmes and she has used ICT for Didactics and Evaluation in her courses at secondary and tertiary level. She has been working in the School of Pedagogical and Technological Education (ASPETE), Department of Education, since 2009. She teaches "Teaching Practice Sessions" to graduate students. She has been a member of organizing committees of conferences in Didactics and Evaluation. She has published in international journals and proceedings of Greek and World conferences with judges.