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METACOGNITION AS A CATALYST FOR IMPROVED LEARNING OUTCOMES IN OPEN & DISTANCE EDUCATION

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Abstract:
Challenges in open and distance education are unique to the learner and generally result in a gap between what is desired and what is realized. This paper explores how metacognition works wonders in bridging this gap and leading to improved learning outcomes within Open and Distance Education (ODE) environments. Metacognitive strategies foster self-regulated learning and assist students in properly planning, monitoring, and assessing their learning processes. In line with this, this paper discusses how metacognition could make a difference in improving academic achievement, promoting independent learning, and building lifelong learning skills within ODE. We demonstrate, from in-depth research and analysis of best practices, how the integration of metacognitive approaches into practice could go a long way in closing the achievement gap and optimizing the educational experience for distance learners. The findings underscore the critical role of metacognition in letting students rise above intrinsic ODE difficulties toward superior learning outcomes.

Keywords: Open & Distance Education, metacognition, self-regulated learning

1. Introduction

In the dynamic landscape of contemporary education, Open and Distance Education (ODE) has turned out to be a powerhouse in the democratization of access to learning and providing flexible and inclusive educational opportunities to several diverse populations across the globe (Moore *et al.*, 2011). On the negative side, challenging issues imbedded in this mode of education usually result in a gap between intended learning outcomes and real student achievements (Kauffman, 2015). This shows the potential for metacognition to make a difference in closing this gap and improving learning outcomes within an ODE environment.

Metacognition can be defined as awareness and regulation of one's cognitive processes and is often referred to as "*thinking about thinking*". According to Flavell (1979)

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and Zimmerman (2002), it gains even greater importance in ODE, where learners are expected to take major responsibility in terms of autonomy and self-direction. Through metacognition, students are able to plan, monitor, and evaluate learning strategies more effectively for the complexities associated with distance education, since it enhances their skills for self-regulation of the learning process.

Metacognitive competencies have been identified as crucial by many previous studies in ensuring better learning outcomes in ODE settings. In a more recent study, Broadbent & Poon (2015), discovered that many learners with well-developed metacognitive skills are in a better position to set realistic goals, manage time effectively, and think critically—all key constructs of successful online learning. In addition, such students have a greater ability to overcome failure and can pursue further education with a greater amount of determination (Wang *et al.*, 2013).

These findings bear significant implications for educators and institutions related to ODE. If metacognitive instruction can be embedded into online curricula, then students will have the opportunity to practice and hone such skills in the interest of eventually creating a more effective and engaging learning environment. This approach not only helps solve existing challenges in ODE, but it also enables learners to acquire very relevant lifelong learning competencies reaching beyond the virtual classroom.

This paper discusses the complex relationship between metacognition and the improvement of learning outcomes in ODE. We will focus on how metacognitive strategies can develop self-regulated learning, letting students create realistic goals and time management and adjust the study approaches so that they suit the needs of a subject and format of assessment. Besides, we would like to discover the role of metacognition in the development of critical thinking skills for deeper engagement with the course material, thus leading to improved academic performance.

The article also treats, from a pragmatic viewpoint, how the multifaceted benefits that metacognition in ODE conveys upon educators and institutions. We will present new ways of effectively integrating metacognitive instruction into online curricula and explore ways to design supportive learning environments for metacognitive development.

In an endeavour to make a very minimal contribution to the continued debate on enhancing the quality and effectiveness of distance education, this article intends to shed some light on the central role of metacognition within the ODE. It charts how to make metacognitive strategies work toward closing the gulf between pedagogic rhetoric and empirical reality about learning achievement, setting a stage for more effective and rewarding educational experiences in the digital age.

2. Definitions of Metacognition

Metacognition is a very broad concept that ranges from perception and regulation of one's personal thoughts all the way through to monitoring and controlling cognitive functions, which involves being able to be self-aware and exhibit self-regulation in

cognitive processes. In essence, metacognition supposes the presence of higher-level cognitive processes in charge of the general cognitive system. These higher-order cognitive processes provide it with self-directed commands regarding the execution of cognitive targets. Again, that reiterates the cyclic dependency between cognition and knowledge.

Metacognition is one of the most important facets of children's development, for it refers to the ability of children to know and manage their own thinking and learning processes. According to Cross and Paris (1998), metacognition refers to the knowledge and regulation of one's cognitive activities, while for Martinez (2006), metacognition is the observation and management of cognition. In the same line, Kuhn and Dean (2004) refer to metacognition as awareness and control over one's thoughts. Ayaz *et al.* (2023) further underline the role of metacognition as a superordinate agent, controlling and monitoring the cognitive system. Conceptually, it is helpful to understand metacognition as a reflective and strategic attitude toward learning and thinking processes, monitoring and controlling cognition for more effective and efficient learning achievements.

As Flavell posited in 1979, metacognition is essentially a kind of cognitive process by which every individual can reflect on his or her own cognition and make use of this information to guide and regulate his or her own thinking and learning. This can be fleshed out a bit more when one views the concept as a two-way system of cognitive processes. A metacognitive model proposed by Flavell enabled people to classify information about objects outside their body as "object-level" processes and information about objects within their body as "meta-level" processes. This model underlines the role of higher-order cognition in monitoring and control over lower-order cognitive processes while also showing how lower-order cognition can itself be an object of higher-order cognition. Therefore, it is an essential part of human cognition and helps a learner be aware of his process of thinking and learning. Consequently, they can learn more effectively.

Metacognition is one such concept in the fundamentals of cognitive psychology which refers to multi-dimensional construct including various classes of cognitive processes or abilities. Flavell, in 1979, presented one of the most basic models of metacognition, claiming that it only consists of two major elements: metacognitive knowledge and metacognitive regulation. Metacognitive knowledge refers to one's awareness and understanding of his or her cognitive processes and strategies, along with knowledge of how one could monitor and regulate his or her own processes. On the other hand, metacognitive regulation alludes to the purposeful deployment by a person of his or her metacognitive knowledge in planning, monitoring, and assessment of one's own cognition toward the attainment of some goal.

The two constructs of metacognition are quite distinct in nature but very closely linked and significantly determine one's thinking and learning processes in some particular direction. Effective teaching and learning may be better understood as based on the complex nature of metacognition, specifically the many subconstructs it entails, that give rise to more effective metacognitive strategies and interventions.

Conventionally, metacognition is described as one's knowledge or understanding about one's own thinking processes. It deals with being aware of one's own cognitive strengths and weaknesses and having the ability to monitor and regulate one's own thoughts and strategies.

Metacognitive expertise is reached when a person makes an active effort to apply such knowledge and understanding toward enhancing one's learning and problem-solving capabilities. This would mean more than mere awareness of one's cognitive processes; a person would need to reflect upon and evaluate them in an effort at self-regulation and performance improvement. The development of metacognitive expertise will allow learners to become self-directed and independent, working toward an effective self-management and -adaptation of the thinking process in different contexts and situations. This is one such area that has been very deeply explored by cognitive psychologists and is very important in achieving success in academics.

Metacognitive knowledge is important in independent learning since it "*represents the knowledge base on which students rely as they make decisions about their learning*." This comprises the learner's self-awareness, completed works, and efficient learning methods. According to Saputri & Kesumawardani (2021), it includes a consciousness of one's personal cognitive processes, purposes, and experiences, making metacognitive understanding important in getting positive outcomes.

3. Enhancing Metacognition and Self-Regulated Learning in Open and Distance Education

Metacognition, the ability of an individual to reflect upon, understand, and guide his or her own cognitive processes, constitutes a core concept in the domain of Open and Distance Education, since learners are often expected to go through the bulk of the process of learning with less direct instructor's help (Bonk, 2016).

Application of metacognitive strategies puts learners at the center of their education. It refers to the development of skills in self-monitoring, self-correction, and self-assessment that can be applied in effectively managing one's learning process. These skills are more significantly required to be exercised in ODE, where the onus of regulation of learning falls heavily on the student.

Metacognition allows for the planning of study approaches, monitoring of comprehension, and evaluation of the effectiveness of learning strategies in operation. Perhaps the most important factor in becoming successful within distance learning scenarios—where students normally have to structure study time and methods on their own—is the self-regulation ability of metacognition.

Metacognitive practices have a positive effect on student academic outcomes. The empirical evidence by Ohtani and Hisasaka in 2018 and that of Bueno and Rodas in 2021 supports the role of metacognition in improving learning outcomes and fomenting lifelong learning skills. These findings point to the fact that in each curriculum, there

should be metacognitive instruction and practice involved, most importantly in ODE settings.

Moreover, metacognition is relevant to the development of skills in critical thinking and problem-solving, basics that will help both academically and in real-life settings. Metacognition assists learners in reflecting on their thought processes, leading to deeper understanding and more effective application of knowledge in a broad domain. Metacognitive strategies incorporated within the educational process also further the ideal of developing independent, self-managed learners. These all align with the more extensive goals of higher education and lifelong learning, preparing people for a shift in changing knowledge landscapes and learning throughout their lives.

In the final analysis, metacognition represents one of the most potent tools to enhance the effectiveness of learning in general and particularly within the open and distance education environment, in view of its ability to foster self-regulated learning, improve student academic performance, and develop basic lifelong learning skills.

4. Types of Metacognitive Knowledge

4.1 Face Knowledge

As already mentioned above, metacognition is a basic attribute of self-regulated learning, encompassing a whole range of processes dealing with monitoring and self-regulation of one's own cognitive functioning. It includes "face knowledge," the capability of identifying individual distinctions of cognitive functioning and information processing in oneself and others. It involves being consciously aware of one's own learning styles and preferences for certain information processing methods, such as visual or auditory processing. In addition, it explores how these methods may vary from person to person and impact the outcomes of learning. Additionally, “face knowledge” considers the influence of abilities, such as language, upon mental processes and their ultimately produced effects on learning. The cognitive domain at the level of the individual is important for formulating effective learning strategies or promoting academic success by allowing one the ability to recognize and understand differences.

In metacognitive knowledge, "Face Knowledge" can be basically divided into two kinds: intrapersonal and interpersonal. Intrapersonal concerns the ability of a person to know one's own thought processes, abilities, favored ways of learning, abilities, and intelligence. Interpersonal ones deal with the identification and valuing of skills, knowledge, and abilities of others to create a more peaceful and collaborative relationship in academic and professional settings.

4.2 Tactical Expertise

Metacognitive tactical knowledge is associated with the knowledge and skill of executing various learning techniques in an appropriate manner. It does not only entail techniques of learning but also the ability to thoroughly understand their application and the occasion for which they are most appropriate. The development of tactical expertise

would enable students to have more controlled and efficient learning where they choose and apply the most appropriate techniques for particular learning occasions. Such purposeful employment of learning strategies, rather than incidental use, boosts self-regulated learning and overall outcomes (Creegan, 2017).

4.3 Understanding of Operations

Operation understanding: In terms, this is a comprehensive understanding of the assigned tasks together with the operations in attaining the specific goals. (Hunter, 2017; Kim *et al.*, 2019; Deng *et al.*, 2023). This concept might involve:

- Understanding of the intent of job or task,
- Recognition of how it relates to oneself's development,
- Evaluation of the difficulty regarding the completion of the assignment,
- Identification of requirements that are essential for the operation.

Clearly, the knowledge of these features allows people to systemize their work and approach it systemized with a convinced effectiveness standpoint and accordingly attract good results. Strategic planning, effective resource utilization, and enhanced problem-solving benefiting from the knowledge enhance performance and attain goals in different contexts, including ODE.

4.4 Control of Thought Processes

One of the critical factors defining metacognition is the degree of self-regulation over one's knowledge and understanding. It involves the active guidance and direction of one's thinking processes and processes of learning (Schraw & Moshman, 1995). One can further metacognitive self-regulation, which elaborates on monitoring, evaluation, and planning processes (Butler, 2015; Cera *et al.*, 2013).

Monitoring is the continuous assessment of the current state of one's mental processes in the performance of a task. It involves being aware of one's comprehension, performance on the task at hand, and how well one is faring. Evaluation entails reflection on what one has learned so far and on the effectiveness of one's cognitive results. Planning involves setting goals, choosing strategies, and allocating mental resources for future learning tasks.

Successful metacognitive self-regulation allows subjects to adapt strategies in an attempt to overcome obstacles and maximize the cognitive performance of their learning. It allows learners to pinpoint holes in their understanding, realize when more time or resources are needed, and make informed decisions about how to proceed with a task or learning goal (Schraw & Moshman, 1995).

It has been demonstrated that learners who are more metacognitively skilled in different domains also tend to be better at learning and problem-solving. Taking conscious control over thought processes may increase learning efficiency, improve the retention of information, and enhance transfer possibilities to new situations better.

4.5 Creation

Planning is a very important process to undertake before actual performance or engaging in any learning activity, especially reading comprehension. This phase comprises an important decision about the working methods suitable and the identification of effective tactics that can have very important impacts on student performance.

Before students embark on a text, they should be able to set goals for themselves and make an appraisal of the text. Only an initial assessment such as this allows a choice of strategies to deploy for comprehension. Skimming will suffice when an overview is called for; close reading when detailed analysis is required.

Several pre-reading strategies can enhance comprehension:

1) Anticipating the text: Students can make predictions about the content based on the title, subheadings, or any available summaries. This primes their minds for the information to come.
2) Analyzing visual cues: Drawing conclusions from images, charts, or graphs accompanying the text can provide valuable context and aid understanding.
3) Exploring themes: Identifying potential themes or main ideas before reading allows students to create a mental framework for organizing information.
4) Vocabulary preparation: Determining the meanings of challenging terms beforehand can significantly improve comprehension during reading.
5) Activating prior knowledge: Reflecting on what they already know about the topic helps students connect new information to existing knowledge.
6) Setting reading goals: Establishing specific objectives, such as identifying key arguments or answering particular questions, can focus the reading process.
7) Choosing appropriate reading techniques: Deciding whether to use techniques like SQ3R (Survey, Question, Read, Recite, Review) or KWL (Know, Want to know, Learned) based on the text type and purpose.

By thoroughly planning and implementing these strategies, students can approach texts more effectively, leading to improved comprehension and retention of information.

4.6 Observation

Tracking is the state or condition of being immediately cognitively aware of an activity. It helps the learner stay on course, makes sensible use of their cognitive abilities through laboring, and never gives up until they have acquired the knowledge they desire. I want to speak about my personal experience teaching kids metacognitive techniques to improve their reading comprehension. This includes rereading the book, which is highly recommended as a reading strategy in order to understand difficult words and their concepts. Generating questions to yourself while reading can further help in comprehending the material that is to be read. You can further monitor your own reading by predicting what will be read next.

4.7 Assessment

Equally important for learning to improve is the assessment of learning outcomes. Learning processes are self-regulated, and choices regarding learning processes are made at this point. Formative assessment is one of the prime tools that can be used to enhance the metacognitive skills of students. It means regular, interactive assessment of student learning to help the educator tailor instruction to meet students' needs. Formative assessment allows students to reflect on their own learning process by thinking about what they are doing well and what they could do better, and working on bridging gaps by applying strategies that will increase the possibilities of grasping and retaining new knowledge. Development of metacognitive skills is especially likely when self-assessment becomes a part of the learning process itself. Through process-oriented learning, students become directly involved in their progress and performance monitoring and in the effectiveness of their study strategies. The development of this reflective practice will allow students to work out not only their strengths and weaknesses but also to achieve self-management of their learning journey and thus become more self-regulated learners. Students learn different ways to study, leading to better academic results by being aware of what they do not know and learning how they can adopt the best ways of learning (Rawson & Dunlosky, 2007).

Embedding self-assessment and formative assessment in the classroom encourages a culture of continuous learning and personal development. Metacognitive strategies are more necessary than ever in distance learning, where direct teacher guidance is very low. Using combined metacognitive practices in assessment helps students to become self-regulated learners who are prepared to handle the common problems usually posed by distance education environments.

5. Metacognitive Aspects in Online Courses

Metacognitive aspects within e-courses make a huge difference in establishing self-regulated learning behavior, which can lead to the success of students. In this perspective, the clear formation of an e-learning structure is more important for online learning because there is very little informal knowledge transfer. It should, thus, detail expectations from both the instructor and the learner, which would otherwise have been compensated by non-verbal cues and informal communications prevalent in physical classrooms. (Chow & Shi, 2014; Back *et al.*, 2016; Guspatni, 2018).

This poses new challenges and responsibilities for educators teaching in an online environment. The three principal tasks of an instructor include developing course materials, communicating regularly with students, and providing constructive feedback on student learning progress. Not all teachers have the ability to deliver teaching lectures, lead classroom discussions, or conduct small-group talks effectively; nor do they know how to effectively evaluate student work. Besides, online teaching is time-intensive, mainly with respect to lecturing and discussions. This, therefore, may be tiring for a

person who is new to teaching online. Some of the main components of a clearly organized online course include:

1) Course description: This will give a gist of the course with respect to objectives, topics, and the skills that a student will gain from it. This would enable students to realize how such a course fits into their needs and the structure of the course. The description should cover the metacognitive features of the course and how they fit within the e-learning structure.
2) Welcome message from the instructor: This would set a positive attitude towards the course so that students feel welcome and valued. You could use it to communicate your teaching philosophy and your availability to answer questions or provide other aid—aligning expectations in an online learning environment where you are not going to be there with non-verbal cues.
3) Clear guidelines on participation and assessment: These clearly lay out how students should participate in discussions, go about submitting assignments, and engage in group activities, while also making the criteria for evaluation clear. This becomes more crucial in an online course because of the need for explicit structuring.
4) Discussion forums to facilitate interaction: These have to be arranged in such a way as to generate constructive debate between the students in the classroom and, at the same time, provide them with a forum where they can share ideas and questions; hence more interaction while working on projects is allowed. This compensates for the informal communication that appears lost in online settings.
5) Friendly, accessible communication: Language should be as inviting and clear as possible to promote a helpful learning environment. This acts as the key to developing a friendly online setting.
6) Clearly stated instructions and expectations: Detailed instructions over assignments and activities are to be provided to the students to avoid misconceptions, and it will help in time management for the completion of students' work. This is under the instructor's responsibility to create a navigable online environment.
7) Constructive and timely feedback: Feedback needs to be specific and action-oriented. It must inform students of what they are doing right, what they are doing wrong, and how to take their performance to the next level. It needs to let students learn the content more deeply. This is among the key roles that online instructors have to perform.
8) Create course materials that engage students: Faculty shall prepare a collection of multimedia resources that would serve different learning styles and keep the students motivated. This is part of collecting teaching skills that would work best for online learning outcomes.
9) Creation and Delivery of Digital Course Content: The instructor should organize the content in a clear, relevant, and very accessible way to all students. It is about the clarity of the e-learning structure.

10) Hosting Discussions Online: Instructors should initiate participation by asking probing questions that will provoke the students toward a deeper understanding of the discussion. This helps in overcoming the challenges of an online communication channel.
11) Individualized support for students: Instructors use one-on-one consultations to address the needs of each particular student, which helps them drive home their issues. This is part of making a friendly online environment.
12) Time management in the virtual space: Instructors have to manage their time wisely between developing content, engaging with students, and administrative tasks in order to keep a resourceful learning environment running. This is one of the special duties of an online educator.

In summary, any instructor teaching classes online must be continuously developing him/herself in order to move at par with this dynamic domain of digital education if he/she is to effectively discharge duties towards successful learning outcomes for students.

6. Social Interaction as a Learning Facilitator in Open and Distance Learning

One of the interesting areas of research involves the interplay between metacognition and social interaction within the open and distance learning environment. In such learning environments, at the same time, social presence becomes an important factor for the enhancement of student engagement and satisfaction. Students joining online discussions and group activities are made to reflect on others' thoughts apart from their personal thoughts. Reflection easily provokes metacognitive processes, which, in the end, aid in enhancing one's understanding of the course material. (Broadbent and Poon, 2015). Social presence is also an important component of emotional learning that can influence online learning and lead to better learning results. Tu and Yen (2007) defined social presence as the degree of one's perception, feeling, and response to being connected to another mental entity via computer communication. Dimensions of social presence, with examples, include interactivity, privacy, and communication through technology. According to Polhemus, Sing, and Swan (2001), cited in Tu & Yen (2007), when social presence is at a high level, it assists students in engaging one another and sustaining such engagement. On the other hand, if the social presence is low, then effective learning can also be low, with a high level of frustration.

According to Gunawardena and Zittle (1997), cited in Tu & Yen (2007), social presence is a valid measure of students' satisfaction in their Web-based classes. Social presence in mediated communication refers to "*feeling the presence of someone else, of being in a group, or the degree to which one is perceived as a real person*." However, social presence is a transitory phenomenon that changes over time. Since people are humanly resistant to giving out information before a level of trust is established, the development of trust becomes imperative to social presence and a requirement for online learning. Hence, the instructor should create a strategy of open discussion with each student and instant

feedback on any issues, questions, or assignments that may develop trust. Garrison calls social presence "*cognitive presence*" (cited in Wallace, 2003).

In this light, Garrison further supported that social presence in distance education influences the level at which students are engaged in their research. Garrison used a four-phase model of exploration including exploration, integration, and resolution and triggering event. Based on Garrison's model, for the generation of social presence by the type and content of their interaction, students have to be effectively participating in online courses where discussion is a valued component. The establishment of social presence at the beginning of an online course is very important because it seems to be a key element in both learning and enjoyment. Online students value discussions with instructors and fellow classmates. However, no official documentation has been found yet on the correlation between the student's performance and the extent to which they contribute to online discussions.

Bonk (2016) developed a taxonomy of online and distance learning support, classifying the kinds of assistance that online educators should offer to support metacognition. In order to enhance a student's social and cognitive makeup through dialogue and interaction, distance education material should include exercises such as:

- goal- and task-setting, planning, and ongoing study.
- querying and reflecting students
- a direct instruction application that uses a procedure step-by-step to advise and guide online learners,
- example for clarity,
- giving immediate constructive criticism or praise,
- organizing cognitive exercises that will lead the students to higher thinking levels, for example, on-going learning self-monitoring,
- using interaction models that define and explain structures, a content facilitator who is concerned with student understanding provides cognitive explanations.
- encouraging inquiry by acting as a facilitator, teaching students how to improve and acquire self-management, facilitating reflection or self-awareness, acting as an inquirer interested in the practice and manner of teaching, and training students to become reflective professionals,
- facilitating discourse or conversation and promoting it through social presence, discourse, and communities of practice, trainees' talk and interaction; problem-solving through collaborative, group endeavors.

7. Conclusions and Suggestions

The effect of metacognition on Open and Distance Education is very profound since it makes learners participative members of their learning. It engages them in self-assessment, monitoring, and regulation of strategies in learning, which is very essential in an environment where direct instructor feedback is less often experienced. This very ability of self-regulation conduces more toward autonomy, adaptability, and

engagement, enabling better academic performance and lifelong learning skills necessary for success in the constantly changing educational landscape of open and distance learning environments.

Considering everything that has been outlined above, online programmes must contain a number of multiple tools for different contexts; they must foster a positive attitude towards technology, and incorporate a social and situated learning environment along with some level of face-to-face interaction. Moreover, they need to include academic staff in order for the participants to be supported in the development of the necessary skills, including the implementation training and administrative support, in order for the students' metacognitive development to be supported (McCracken, 2008). The second is that universities, in effectively providing open and distance learning, should have a core business directed at developing a common strategic vision with increased promotion of programme coherence. This is triggered by the fact that they address a very wide spectrum of issues. Relevant and successful online learning and ODL practices do call for support to both staff and students as a basis for quality when offered. Such efforts can help students actualize metacognitive efforts as they work through a program. Third, faculty members moving higher education classes to an online delivery should be sure to provide the students with a conceptually grounded, clearly stated methodological pedagogical approach to such classes. One pedagogical paradigm of teaching online classes that has gained attention from the experts working in this field of inquiry is Nelson and Narens' framework (1990).

Other models, however, developed by Zimmermann, Bandura and Flavell also can inform teaching online metacognitively. Furthermore, the onus is upon the online facilitator to ensure that evaluation is incorporated appropriately into the course processes. The outcome of student learning would need to be aligned to self-monitoring, metacognition and strategies of self-regulated learning. Instructors should, therefore, not assume that students who apply more of the self-regulation strategies outperform students who use fewer strategies.

Further research is required to enhance our understanding of metacognition, self-regulation, and self-regulated learning to ensure effective teaching methods (Waters & Schneider, 2010; Bonk, 2016)). What should also be highlighted is that we need to find out whether new online students are ready to plunge into the virtual space. Of course, it goes without saying that a metacognitive construct for learning online cannot be functional if students are not oriented to this new mode that will guarantee success in the process of learning. Support structures must be adequate and available throughout the course. Technical support is very important, too. Lastly, and more importantly, students learning online and at a distance should be entitled to mentorship programs where they get involved with mentors who would guide them throughout the online program.

Conflict of Interest Statement

The author declares no conflicts of interest.

About the Author

Georgia Karagianni studied English Language and literature at the University of Athens and later specialised in areas such as educational psychology, intercultural education, counselling, teaching Greek as a foreign language, curriculum design, content development etc. She holds two postgraduate diplomas "New forms of education and learning" and "Language education for refugees and migrants". Since January 2020, she is a PhD candidate in the field of Open and Distance Education at the Hellenic Open University. She has worked as an English language teacher at both levels of education for 14 years and served as Head of Educational Affairs at the Karditsa Department of Education for 5 years. Since April 2023, she has been serving as an Education Counsellor for the first & second level education of Trikala & Karditsa prefectures. She has participated in presentations at international conferences, has written articles in international journals and is the author of three books on teacher training, social-emotional learning and inclusion.

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