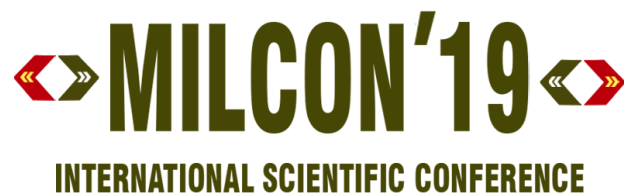


# *Proceedings of Papers*

**2-nd International Scientific Conference MILCON'19, Skopje**

---



**November 12th, 2019**

*MILCON 2019 International Scientific Conference is supported by:*



*This conference is organized under scientific auspices of the following institutions:*



The Conference is organized by the Military Academy "General Mihailo Apostolski"- Skopje associated member of the University "Goce Delcev" - Shtip, within the RADLI Project (Regional Advance Distributive Learning Initiative), supported by the Kingdom of Norway and implemented by the Jefferson Institute, USA.

The Conference has been immensely supported by the Ministry of Defence and the Armed Forces of the Republic of North Macedonia

## *Preface*



### *Respected readers,*

In front of you is the thematic Proceedings, as a collection of papers presented at the 2nd MILCON'19 Conference "Contemporary education based on ADL", organized on November 12<sup>th</sup> 2019, by the Military Academy "General Mihailo Apostolski" - Skopje associated member of the University "Goce Delcev" - Shtip, within the RADLI Project (Regional Advance Distributive Learning Initiative), supported by the Kingdom of Norway and implemented by the Jefferson Institute, USA.

The objective of the Conference was to gather educators and trainers from different countries in order to give us the opportunity to increase both knowledge and cooperation within all aspects of advance distributed learning - ADL. Hence, the Proceedings contain **32** papers focused on the contemporary trends in the use of information technology in a pedagogical way, as well as the best practices both from a theoretical point of view, but also from a practical aspect on the topics related to educational programs using blended learning, emerging learning technologies, multiplatform delivery of courseware, motivational and pedagogical learning strategies and other topics related to ADL. This international scientific conference gives us a wonderful opportunity for exchanging experience and knowledge between the scientific workers and the practitioners from North Macedonia, USA, Serbia, Poland, Slovenia, Bosna and Hercegovina and Norway.

The papers published in the Proceedings are written by eminent scholars as well as by members of the security system participating in the educational process of the army, police and other security services from different countries.

Each paper has been reviewed by international experts competent for the field to which the paper is related.

The data and information gained with the empirical research, as well as theoretical thoughts and comparative analyses in the Proceedings will give a significant contribution to the development of the use of ADL in a pedagogical way.

We wish to extend our gratitude to all authors and participants to the Conference, as well as to all those who contributed to, or supported the Conference, especially the Kingdom of Norway and the Jefferson Institute, as well as to the Ministry of Defense and the Armed Forces of the Republic of North Macedonia for their immense support of the Conference.

Skopje, November 2019

**Conference chairs**

**JUGOSLAV ACHKOSKI**  
*North Macedonia*

**BILJANA KAROVSKA ANDONOVSKA**  
*North Macedonia*

**Keynote Speakers**

**AARON PRESNALL**  
*USA*

**TONY MULLIS**  
*USA*

**GEIR ISAKSEN**  
*Norway*

**PIOTR GAWLICZEK**  
*Poland*

**International Scientific Committee**

**GEIR ISAKSEN**  
*Norway*

**DARKO ŠČAVNIČAR**  
*Slovenia*

**NEVENA SERAFIMOVA**  
*North Macedonia*

**BILJANA PRESNALL**  
*USA*

**NEVEN TRAJCHEVSKI**  
*North Macedonia*

**AARON PRESNALL**  
*USA*

**ORCE POPOVSKI**  
*North Macedonia*

**TONY MULLIS**  
*USA*

**METODI HADZI-JANEV**  
*North Macedonia*

**SAE SCHATZ**  
*USA*

**STOJCE DESKOVSKI**  
*North Macedonia*

**PIOTR GAWLICZEK**  
*Poland*

**SIME ARSENOVSKI**  
*North Macedonia*

**SEAD MURATOVIC**  
*Bosnia and Hercegovina*

**GORAN SHIMIC**  
*Serbia*

**BEKIM MAKSUTI**  
*North Macedonia*

**DEJAN RANCIC**  
*Serbia*

**VLADMIR TRAJKOVIC**  
*North Macedonia*

**Organizing Committee**

**SLAVKO ANGELESKI**  
*North Macedonia*

**DRAGE PETRESKI**  
*North Macedonia*

**ROSE SMILESKI**  
*North Macedonia*

**ZORAN JOVANOVSKI**  
*North Macedonia*

**METODIJA DOJCHINOVSKI**  
*North Macedonia*

**SASHO GELEV**  
*North Macedonia*

**ZORAN GACOVSKI**  
*North Macedonia*

**ALEKSANDAR GLAVINOV**  
*North Macedonia*

**NENAD TANESKI**  
*North Macedonia*

**TONI GEORGIEV**  
*North Macedonia*

**ANDREJ ILIEV**  
*North Macedonia*

**LAZAR GJUROV**  
*North Macedonia*

**OLIVER ANDONOV**  
*North Macedonia*

**ALEKSANDAR PETROVSKI**  
*North Macedonia*

**SASO DANEVSKI**  
*North Macedonia*

**ELENIOR NIKOLOV**  
*North Macedonia*

**JONCHE IVANOVSKI**  
*North Macedonia*

<b>MILCON 2019 Reviewers</b>
------------------------------

**SASHO GELEV**  
*North Macedonia*

**PIOTR GAWLICZEK**  
*Poland*

**SEAD MURATOVIC**  
*Bosnia and Hercegovina*

**NEVENA SERAFIMOVA**  
*North Macedonia*

**AARON PRESNALL**  
*USA*

**BILJANA PRESNALL**  
*USA*

**NEVEN TRAJCHEVSKI**  
*North Macedonia*

**NENAD TANESKI**  
*North Macedonia*

**ELENA TRAJANOVSKA**  
*North Macedonia*

**JUGOSLAV ACHKOSKI**  
*North Macedonia*

**TONY MULLIS**  
*USA*

**LAZAR GJUROV**  
*North Macedonia*

**ZORAN GACOVSKI**  
*North Macedonia*

**SLAVKO ANGELESKI**  
*North Macedonia*

**DEJAN RANCIC**  
*Serbia*

**GEIR ISAKSEN**  
*Norway*

**BILJANA KAROVSKA ANDONOVSKA**  
*North Macedonia*

**ANDREJ ILIEV**  
*North Macedonia*

**ELENIOR NIKOLOV**  
*North Macedonia*

**GORAN SHIMIC**  
*Serbia*

**JOVAN BAJCETIC**  
*Serbia*

**ALEKSANDAR PETROVSKI**  
*North Macedonia*

## Conference Secretariat

**ELENA TRAJANOVSKA**  
*North Macedonia*

**ANER BEHLIC**  
*Bosnia and Hercegovina*

**BILJANA DULOVIC**  
*Montenegro*

**KRISTIJAN ILIEVSKI**  
*North Macedonia*

### Contact Information:



[milcon@mod.gov.mk](mailto:milcon@mod.gov.mk)



+38971292498

All rights reserved. This book, or parts thereof, may not be reproduced in any form or by any means, electronic, or mechanical, including photocopying or any information storage and the retrieval system not known or to be invented, without written permission from the Publisher.

**Table of contents**

Use of training needs' analysis for improvement of cadet's training skills.....	9
<i>Z Cikarski, Lj Shosholovski and R Mustafovski</i>	
Project based learning approach for undergraduate mechatronics education using the Arduino online platform .....	15
<i>S Domazetovska, J Jovanova and V Gavriloski</i>	
Kahoot! foster students' engagement, enhance classroom dynamics, assess and improve overall students' learning .....	26
<i>N Kletnikov, O Popovski and A Tomova</i>	
Online and distance learning program evaluation: a call for action .....	33
<i>T Mullis</i>	
Some aspects of using the ship's stability stand bed.....	42
<i>W Mironiuk and M Mięsikowski</i>	
Face recognition technology in the exam identity authentication system - implementation concept .....	49
<i>Lj Arnautovski</i>	
How to improve students' motivation in online education?.....	55
<i>B Karovska - Andonovska and E Trajanovska</i>	
E-learning platforms: The future of education .....	61
<i>K Ilievski, A Behlić and J Achkoski</i>	
E-learning course personalization using a Fuzzy logic, experience based algorithm (controller).....	67
<i>N Manev and E Nikolov</i>	
Development and implementation of special research procedures for risk prevention on sport events - with a special accent on the role of the police.....	73
<i>J Ivanovski and A Nedev</i>	
Bio-inspired and origami engineering approaches for project based learning mechatronics .....	79
<i>M Anachkova, V Gavriloski and J Jovanova</i>	
Moodle as an advanced distributed learning platform .....	87
<i>A Behlić, K Ilievski and B Dulovic</i>	
Learning strategies and metacognitive awareness.....	93
<i>Lj Shosholovski and R Mustafovski</i>	
<i>E-learning System based on Recommendations, implemented in Matlab .....</i>	101
<i>E Kamceva, Z Gacovski and A Sefidanoski</i>	
Modern platforms on the Internet as a instrument of power in hands of violent religious extreme organization .....	110
<i>N Taneski, B Karovska-Andonovska and A Petrovski</i>	

Video-conferencing distance learning.....	117
<i>A Stojanova, M Kocaleva, N Koceska and S Koceski</i>	
An autonomous mobile robot for obstacle avoidance .....	124
<i>A Panov and S Gelev</i>	
Improving the current way of learning in the Border Police of Republic of North Macedonia in e-learning and smart learning environment.....	131
<i>T Chekovikj and J Kalach</i>	
ADL based preparation, establishment and performance assessment of a tactical exercise for a communication network realization in a training procedure.....	139
<i>J Bajcetic, S Devetak, V Ristic and G Šimić</i>	
History of Heutagogy as a self-determined learning .....	146
<i>A Ilieva Nikolovska, A Grizev and A Iliev</i>	
Time allotment and its influence in the FLP computer-based assessment of the reading skill .....	153
<i>M Gjurovikj and E Trajanovska</i>	
International military cooperation with medical VR training .....	159
<i>B Presnall</i>	
Learning and Motivation.....	165
<i>A Iliev, Z Jovanovski and M Dojcinovski</i>	
Challenges of Differentiation in Learning and the ADL Approach .....	172
<i>N Serafimova</i>	
E-learning in the Slovenian armed forces - an example of good practice.....	182
<i>D Ščavničar</i>	
E-learning.....	192
<i>A Glavinov, B Jovanova and K Hrnjić</i>	
Implementation of the Advanced Distributed Learning (ADL) concept in the Ministry of Defense and the Armed Forces of Bosnia and Herzegovina.....	198
<i>S Muratović, S Blavicki, S Konjević and A Kasumović</i>	
Next Generation Digital Learning Environment (NGDLE).....	207
<i>R Mustafovski and B Temelkovski</i>	
Use of Technology .....	214
<i>S Tasevska and B Temelkovski</i>	
Advance distributed learning – ADL Motivational and pedagogical learning strategies.....	220
<i>S Idrizovska and B Temelkovski</i>	
The development of modern distance education .....	225
<i>B Filipovska, E Filipovska and D Petreski</i>	
Global educationand disaster preparedness.....	233
<i>M Timovska and A Timovska</i>	



## How to improve students' motivation in online education?

**B Karovska-Andonovska<sup>1</sup> and E Trajanovska<sup>2</sup>**

<sup>1,2</sup>Military Academy "General Mihailo Apostolski", Goce Delchev University,  
ul. Vasko Karangelevski b.b, 1000 Skopje, North Macedonia

E-mail: biljana.k.andonovska@morm.gov.mk

**Abstract.** One of the most important aspects of the education process is students' motivation. Motivating students is a challenge that professors have to face every day. This is even more challenging in online education where professor-and-student connection or interaction is greatly limited. Motivation to learn is characterized by long-term, quality involvement and commitment to the process of learning. Having in mind that the future of online education is coming and that it will incorporate adaptive technology as well as fusion of virtual and old-fashioned reality, online students' motivation will remain an important aspect of the contemporary educational process. This paper is focused on the ways and specific methods that professors or instructors should apply in order to provide students' motivation with a special focus to online students' motivation. Professors should use appropriate ways and should give a frequent, early, positive feedback that supports students' beliefs that they can do well. In order to improve students' motivation, particularly in online education, professors should provide opportunities for students to set their own goals, as well as to establish a system for self-monitoring and progress-tracking. In this regard it is also important if professors demonstrate how the subject is related to students or how it is related to real life. Finally, getting students involved and giving them a sense of control, will certainly improve their motivation.

### Introduction

We live in a modern society where information technology and communication media are essential parts of our lives. The modern information and communication technology also influence contemporary education. Current trends show the rapid growth of online enrollment in higher education.

Many universities, academies and colleges have been expanding online education or considering offering online education courses or programs. The growth of the Internet and related technologies has resulted in a merging of online teaching and learning into the routine practices of education institutions. Online education is particularly appropriate for those learners, especially the adult students, who have no opportunity to attend face-to-face classes due to work or family obligations.

Online classes during a period of 24 hours a day, and 7 days a week, gives participants an expanded, flexible forum for networking, discussing, and debating all the time, whenever they want. A huge number of authors suggest that the most important factors that influence students' success are student motivation, the nature of learning tasks, learner characteristics, and the instructor. However, at the same time, a variety of factors has been identified as crucial to the success of online courses. One of those factors is certainly online students' motivation. Since this is a specific online learning environment, poor motivation sometimes could be a decisive factor in contributing to the high dropout rates from online courses.

Having in mind that the future of online education is coming and that it will incorporate adaptive technology as well as fusion of virtual and old-fashioned reality, students' motivation will remain an important aspect of the contemporary educational process. Motivating students as a challenge that professors have to face every day. This is even more challenging in online education where professor-and-student connection or interaction is greatly limited.

Motivation is not synonymous with achievement, and student motivation cannot necessarily be inferred by looking at achievement test scores, because immediate achievement and test performance are determined by a variety of factors and may even be assured through a variety of ways, and some practices that serve to increase immediate achievement may actually have the effect of diminishing students' interest in learning as well as their long-term involvement in learning [1]. In order to build a more engaging environment for online discussion that promotes active student participation, it is necessary to identify which characteristics promote learner engagement during online course discussions [2].

Why is students' motivation so important?

Student motivation naturally has to do with students' desire to participate in the learning process, but it also concerns the reasons or goals that underlie their involvement or noninvolvement in academic activities [3]. The best lessons, books, and materials in the world won't get students excited about learning and willing to work hard if they're not motivated [6]. However, if students are motivated, they will feel they belong more to the class courses and will certainly put more effort in their work. Teaching in a class full of motivated students is enjoyable not only for the teacher, but also for the students or participants in courses. Motivated students are more excited to learn and to participate. Many times, if not always, motivation is a precondition not only for choosing to learn, but also for what we learn as well as for how we learn. It is more likely that motivated learners undertake challenging activities and are actively engaged. At the same time, motivated students enjoy their learning, and because of that exhibit persistence and creativity.

As one of the foremost problems in education, motivation is important because it contributes to achievement, but it is also important itself as an outcome [1]. As an outcome motivation is important to all students and this view gives student motivation a central place as an educational outcome, important in its own right [1]. Moreover, motivation is very important because university students can learn very well if they have high level of learning motivation, or as opposite, cannot learn well if they have a low level of learning motivation.

Motivation is so crucial in teaching and learning that is almost impossible to teach effectively someone who is unmotivated to learn [4]. Motivation, both intrinsic and extrinsic, is a key factor in the success of students at all stages of their education, and teacher can play a pivotal role in providing and encouraging motivation in their students [6].

Motivation in e-learning environment

Learner's motivation is very important in an online coursework environment because it can influence not only students' decisions to stay in or drop out of a course, but it also influences learners' degree of engagement in the course as well as the quality of student's work, and their level of achievement in the online course. In the same time motivation is an important variable related particularly to adult distance learner success. Students with high intrinsic motivation often outperform students with low intrinsic motivation and although little is known about the processes that lead to these differences, in education based on simulations or authentic electronic learning environments, this lack of insight is even more clear [7].

Some authors underline student motivation as the single most important predictor of student success in distance education [5]. The results of some analysis which investigated what students actually did in an electronic learning environment, showed that students with high intrinsic motivation did not do more, but they rather tended to do different things. Analysis of log files showed the increased curiosity that students with high intrinsic motivation have which resulted in proportionally more explorative study behavior. However, the learning outcomes of students with high intrinsic motivation were not better [7].

In another research the classical and electronic learning was compared and results showed that e-learning students are more intrinsically motivated than traditional students. Moreover, e-learning students manifested significantly stronger intrinsic motivation than traditional classroom students at all three intrinsic motivation measures: (a) to know, (b) to accomplish things, and (c) to experience stimulation [5]. According to author, one possible explanation of these findings is that more

intrinsically motivated students self-select online versus traditional classroom courses where self-selection can apply both new and continuing students. In mentioned research, e-learners also report learning to be more pleasurable and they have greater satisfaction with the process of learning. These results suggest that student's subjective or perceived task value of e-learning may be an important consideration. The state of motivation to learn exists when student engagement in a particular activity is guided by the intention of acquiring the knowledge or mastering the skill that the activity is designed to teach [8].

Research has shown that good everyday teaching practices can do more to counter student's apathy than special efforts to attack motivation directly [3]. Thus, they find out that they are a part of well-organized online course led by a dedicated and enthusiastic professors or instructors, interested in what their students learn and how they learn.

Why can students be unmotivated?

Motivation can be a complex and multifaceted phenomenon that cannot be fully explained from the perspective of motivation as either a learner characteristic or an effect of learning environment design [9]. Although students may be equally motivated to perform a task, the sources of their motivation may differ [3]. There are really a lot of factors that affect students' academic motivation for success. Some of these factors are related to genetic attributes of students and some of them are related to environmental conditions provided to students [4]. However, motivation remains one of the most important factors of learning and a lot of studies have been performed to find some ways to motivate learners for improving their learning levels. But, while some students are self-motivated, with a natural love of learning, other students do not have this natural self-motivation. Some of the students are motivated by a drive for personal success (intrinsic motivation) and others from their peers or by challenges in the classroom itself (extrinsic motivation).

A person is more in control and more vested in their learning if they are internally motivated [4]. They seem to have a stake in the outcome. However, according to Stirling, such definite dichotomous approach to determining the nature of motivation might not yield the real image of learners and the process of learning in this context. A third perspective is also possible: the view that some motivational traits are inherent, but that their expression can be supported or thwarted based on the environments in which a person functions [14]. Having this in mind, intrinsic motivation cannot be analyzed in isolation, i.e. it is profoundly influenced positively or negatively by the specificity of the learning environment per se, including teacher/instructor role, reward/sanction system in place, etc.

One of the main factors that can influence students' motivation is the nature of the academic tasks, the instructional methods and the instructor's behavior, as well as the reward and goal structures. But why can students be unmotivated? Students may be unmotivated for a variety of reasons. Students seem to be particularly unmotivated to learn material that appears uninteresting to them or unrelated to their own life experiences and career goals. For example, they may feel that they have no interest in the subject, or they may find the teacher's methods un-engaging. Therefore, the instructor should focus on teaching in a way that the students feel intrinsically satisfied in the classroom. Internally motivated students are able to decide for themselves if and when they will become engaged in the learning process. It is the same in online education. Students or participants in online courses could simply be distracted for different reasons, external forces, etc. Due to some of these reasons, some students could drop out of online learning.

Even though the benefits of online discussion and online courses and education are obvious, this is not guaranteed, because some research shows a number of factors that result in low levels of student participation. Moreover, results from some researches provided evidence that students' participation in online discussion was related to their intrinsic motivation and that over time, students' intrinsic motivation for participating in online discussion dropped steadily [10]. One of the biggest reasons for this is a feeling of isolation and lack of social interaction, as well as a feeling of disconnection because of lack of contact, interaction and cooperation with professors and with other participants. There are also differences between intrinsically and extrinsically oriented students. Intrinsic orientation students use more logical information - gathering and decision-making strategies and they tend to prefer tasks that are moderately challenging. Extrinsic orientation students are inclined to put forth the minimal

amount of effort necessary to get the maximal reward and they gravitate toward tasks that are low in degree of difficulty [3].

How to improve students' motivation?

One of the most difficult aspects of becoming an educator (professor, teacher, instructor, etc.) is learning how to motivate students. At the same time, it is also one of the most important aspects of the educational process. Motivating students can be a difficult task that takes time and a lot of effort. Designing a motivating learning environment deserves attention and requires great dedication. Motivation comes from many different factors. Teachers play an important role in inspiring motivation among their students and in encouraging them to be actively involved during classes. The professor's behavior and teaching style are some of those factors. Motivation even comes from inspiring teaching materials. Results from some studies validate the importance of three factors which influence motivation in online education such as: online participation, social presence, and collaboration [11]. These factors are crucial for the creation a proper instructional design that promotes learners' motivation and those factors could imitate the traditional engaging learning environment to some extent.

However, motivation to learn needs long-term, effective involvement and commitment to the process of learning. In that process, teachers should always have in mind that all students are motivated differently. Moreover, when designing learning activities professors and instructors need to be aware of the important role they play in influencing student or learner motivation. According to Brophy, no motivation strategies can succeed with students if some preconditions are not in effect [3]. He lists more than thirty preconditions and we completely agree that all the listed preconditions are important for students' motivation. Some of those preconditions are the following: Creating a supportive environment; Appropriate level of challenge/difficulty; Meaningful learning objectives; Helping students to recognize linkages between effort and outcome; Offering rewards for good performance; Structuring appropriate competition; Providing immediate feedback to student responses; Adopting tasks to student interests; Including novelty/variety elements, etc.

How to improve students' motivation in online education?

We should be aware that many of the factors, tools and methods applied in traditional education, could also be applied in online education in order to motivate students. Moreover, a major concern in the field of online education is how to provide students with an effective online education experience. At the same time, there are some specific methods that can be applied in online education and that can improve online students' motivation and dedication to process of learning. Those methods are particularly appropriate for adult students who normally expect to be treated like unique individuals with defined goals and specific personal interests. Once they realize that you are on their side, they will feel more comfortable contributing to class discussions and relating the subject matter to their own lives [13]. Nevertheless, without a good engagement strategy, online learners could easily drop out losing their interest in the lesson, feeling isolated or disconnected [12]. In order to motivate online students, professors or instructors should provide them opportunities to personally connect with the subject matter. They should also ask online students to set their own goals as well as to set up a system for self-monitoring and progress-tracking [13]. Professors and instructors should encourage their students to take part in creating syllabus reading material.

Engagement strategy could include two main ways or achievements. Firstly, professors and instructors should give students frequent, early, positive feedback that supports their beliefs that they can do well. The relevance and the value of the task need to be clearly identified and linked to learning objectives in order to help learners understand how the activity can aid in the realization of personal goals, aspirations, and interests. By establishing frequent, ongoing communication with learners, where they feel able to discuss issues in an open and honest manner, practitioners are in a better position to accurately monitor and respond to situational factors that could potentially undermine learner motivation [9].

Professors and instructors should help students find personal meaning and value in the material and assign tasks that are neither too easy nor too difficult. In particular, students are more likely to want to learn when they appreciate the value of classroom activities and when they believe they will succeed if they apply reasonable effort [8]. Professors should also use some appropriate methods in order to motivate their students and to encourage them to live up to their true potential. To facilitate active participant engagement in online discussions, teacher education programs can recognize the interplay between intrinsic/extrinsic motivation when designing and implementing online courses [2]. In addition, professors and instructors should encourage their students to be active participants in online class discussions as well as to offer them choices in terms of research projects and essay assignments, and finally to give constructive feedback. This shared responsibility helps students stay involved and feel connected to the subject matter, the other students in the class, and themselves, as learners [13].

Motivation of learners in online environments can be represented through the John Keller's ARCS Model. Keller's ARCS model refers to four key components related to learners' motivation, i.e. attention, relevance, confidence and satisfaction. Within this paradigm the successful motivation relies on gaining and maintaining learners' attention, making a strong connection between the learning process and real-world application – relevance. Furthermore, the success of the learning process is associated with creating conditions by teachers/instructors for learners' confidence that they can achieve the goals regarding the taught subject, whereas, satisfaction arises from learners' feeling of accomplishment [15]

To further support working adults within large online classes, professors and instructors may choose to focus on quality rather than quantity. For example, they may require fewer online discussions, and when they take place, instead of having an open discussion, they can be focused on applying a course concept to the classroom. Moreover, adding the element of fun to courses with multi-media channels like animations, videos or games, will certainly develop learners' creativity and will engage them to actively participate in online work. Those elements will give the students a short break during classes.

## Conclusion

Online learners' motivation has been considered as one of the important factors that drives online learning. Many different factors influence students' motivation in classical education, but also in online education. However, there are some specific factors that influence students' motivation in online education. Thus, different methods can be used in order to motivate students and to encourage them to live up to their true potential. Online participation has been argued as the strongest factor that contributes the most to learning effectiveness in online environment. Two key components that influence active participation during online class discussions are the professors/instructors and the students/learners.

Altogether, students expect to learn if their professors expect them to learn. Having this in mind, at the mere beginning of a course, students/learners should be familiar with the value of online education. Course requirements should be clearly established, as well discussion topics. Those requirements are a precondition for a positive class environment, which is very important. At the same time, one of the certainly most important factors for motivation is related to students' participation in online discussion. Having this in mind, professors should encourage students' participation, when they decide to use it in a class activity. Students' participation could be improved with some methods that encourage them to get involved in discussion, such as work in pairs, syndicate group, competition, offering rewards, using positive reinforcement, giving them a chance for improve, etc. even in online classes. In online courses as well as in a traditional classroom, students should understand the relevance of what they learn.

Students are more often interested in learning subjects that have immediate relevance and impact to their job or personal life, particularly adult students. Hence, in order to motivate students, professors should demonstrate them how the subject relates to their everyday lives and how it will impact their future careers. It is important to explain them that what they learn in online courses can be implemented in their careers.

References

- [1] Ames, C. A., Motivation: What Teachers Need to Know, *Teachers College record* 91 (3), p. 409-421, 1990
- [2] Lee, J. and Martin, L., Investigating Students' Perceptions of Motivating Factors of Online Class Discussions, *International Review of Research in Open and Distributed Learning*, University of Texas at Arlington, Volume 18, Number 5, 2017
- [3] Gregory, R., *Student Motivation*, Center for Teaching Excellence, United States Military Academy, West Point, NY, 2009
- [4] Tan, Ş, Perception of students on factors in motivation to learn, *e-Journal of New World Sciences Academy*, Volume: 4, Number: 1, Article Number: 1C0013, 2009
- [5] Rovai, A. P., Ponton, M., Wighting, M., & Baker, J., A comparative analysis of student motivation in traditional classroom and e-learning courses, *International Journal on E-Learning*, 6 (3), 413-432, 2007
- [6] 21 Simple Ideas to Improve Student Motivation, by Teach Thought Staff, available at: <https://www.teachthought.com/pedagogy/21-simple-ideas-to-improve-student-motivation/>
- [7] Martens, R. L., Gulikers, J., & Bastiaens, T., The impact of intrinsic motivation on e-learning in authentic computer tasks, *Journal of Computer Assisted Learning*, 20(5), 368-376, 2004, available at: <http://dx.doi.org/10.1111/j.1365-2729.2004.00096.x>
- [8] Brophy, J., Synthesis of Research on Strategies for Motivating Students to Learn, *Educational Leadership* 45(2):40-48
- [9] Hartnett, M., St. George, A., Dron, J., Examining Motivation in Online Distance Learning Environments: Complex, Multifaceted, and Situation-Dependent, 2011, available at: <http://www.irrodl.org/index.php/irrodl/article/view/1030/1954>
- [10] Xie, K., DeBacker, T. K., & Ferguson, C., Extending the traditional classroom through online discussion: The role of student motivation. *Journal of Educational Computing Research*, 34(1), 67-89, 2006, available at: <http://dx.doi.org/10.2190/7BAK-EGAH-3MH1-K7C6>
- [11] Widjaja, A., Chen, J., Effect of Online - Participation, Social Presence, and Collaboration, available at: [https://www.researchgate.net/publication/321992187\\_Online\\_Learners'\\_Motivation\\_in\\_Online\\_Learning\\_The\\_Effect\\_of\\_Online-Participation\\_Social\\_Presence\\_and\\_Colla](https://www.researchgate.net/publication/321992187_Online_Learners'_Motivation_in_Online_Learning_The_Effect_of_Online-Participation_Social_Presence_and_Colla)
- [12] Why online student motivation is important? Available at: <https://www.flearningstudio.com/why-online-student-motivation-is-important/>
- [13] Stanford, D., How to Motivate Students Online: What Works and What Doesn't, 2016, available at: <https://elearningindustry.com/motivate-students-online-works-doesnt>
- [14] Stirling, D. "Motivation in Education." Learning Development Institute, 2014
- [15] Keller, J.M., *Motivational design for learning and performance: The ARCS model approach*. New York: Springer, 2010