

# MILCON'19

International Scientific Conference

# Proceedings

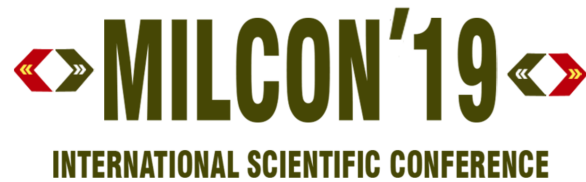


ISBN 978-9989-134-10-4

# *Proceedings of Papers*

2-nd International Scientific Conference MILCON'19, Skopje

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**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

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## Learning and Motivation

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**Abstract:** Everything in our lives is underlined with some sort of motivation. This includes our students and their motivation to learn. Motivation is essential for learning and represent a driving force for students to complete their tasks and to build their knowledge. There are many factors which could potentially influence motivation, which makes research on this topic as it relates to learning diverse and abundant. However, motivational considerations can be summed up as being either task or ego-oriented. For facilitating task-oriented learning is recommend that teachers evaluate student performance based on an absolute scale rather than on a scale that compares student performance

against each other, emphasize student participation and self-improvement in learning and incorporate test questions that require explanations and justifications rather than memorized material. Students are motivated by knowing that what they are learning has a greater purpose. They want to know that what they learn in the classroom has relevance and significance to their daily lives. Students who are motivated conduct themselves in ways that maximize learning and success in academic environment. Motivated students attend classes on a regular basis without a need for external rewards, they seek additional help when is needed and they turn in quality work on time. On the other hand, unmotivated students minimize the effort they exert, which result in continued poor performance. Based on this concept, students are motivated to learn if they perceive having adequate support from their social environment and their master skills have positive social effect in real life. Students feel this sense of belonging if they believe their teachers are supportive of social aspects in the classroom, such as promoting interaction and respect among students.

The purpose of this paper is to review research conducted on student motivation on learning and in the process to identify teaching methods which are motivating students to learn.

### 1. Introduction

Behavioral and cognitive psychologists agree that motivation is essential for learning. Yet how to motivate learners in the classroom continues to be one of the most puzzling problems confronting the teacher. Relationship between motivation and learning is issued by Suprijono [4]. He states that motivation to learn is the process that gives the spirit of learning, direction, and persistence of behavior. That is, the motivated behavior is behavior that is full of energy, focus and enduring. Furthermore we define that motivation to learn is the overall driving force within the students who lead activities and provide direction on learning activities. Thus, motivation is born from the need to achieve the goal. Motivation to learn is very important for the realization of learning achievement. For this reason, students must have the ability to motivate themselves since it is truly required to gain achievements. For increasing our learning motivation, we must identify some indicators in certain stages [5]. Motivation indicators are: 1) the duration of the activity; 2) the frequency of the activity; 3) persistence of the objectives of the activity; 4) fortitude, tenacity and ability in the face of actions and difficulties to achieve the objectives; 5) devotion and sacrifice to achieve goals; 6) the level of

aspirations to be achieved by the activities carried out; 7) the level of qualification achievement; and 8) toward its attitude toward the target activity.

Professor Hamzah defines that the characteristics or indicators of motivation are [6]: 1) desires and wishes to success; 2) encouragement and learning needs; 3) hopes and ideals of the future; 4) awards in learning; 5) interesting activities; and 6) the existence of a conducive learning environment. Meanwhile, dimensions and indicators of motivation based on theory of learning motivation are [7]: 1) intrinsic dimension actively involve the learning activities, the urge to find out things related on encouragement to learn independently; and 2) extrinsic dimension avoid in teachers "punishments" encouragement to get praise from the teacher, the urge to please parents, the urge to get good grades and encouragement from friends. We use all the indicators mentioned above in arranging a questionnaire study due to their significant differences. As the consequence, all of them would represent an assessment on learning motivation.

According to educational psychologists, three factors affect learning: Motivational factors, Physiological factors and Environmental factors. Motivational factors are psychological factors that condition learning. Sufficient motivational force, not only initiates activity which results in learning, but also sustains and directs its. Kinds of Motivation: There are two kinds of motivation in the context of learning. These are: Intrinsic motivation and Extrinsic motivation. Intrinsic motivation is the most effective type of drive which makes the matter to be learnt significant or meaningful to the learner. Extrinsic motivation which is external to the learning activity includes praise and blame, rivalry, rewards, punishments, and knowledge of progress. Other sources of motivation may include desire for social approval, domination, urge to excel and so on. Individuals differ greatly in their achievements and power motivations.

## 2. Learning process

Learning means – (a) activities and (b) experience. Both teaching and instruction influence learning through various activities and experiences. Learning and teaching mean the modification of pupils' behavior through activities and experiences. Various learning theories view this differently. Stimulus-Response (S-R) theories treat man as a machine. For them, the organism is governed by fixed principles and motivation of behavior originates from psychological drives. On the basis of cause-effect, the behavior of organisms can be predicted. Motivation is an urge to act. This urge results from stimuli which may be internal or external. Behavior does not consider any 'purpose.' S-R theories give importance to past experiences to explain the causes of present behavior. Motivation results from psychological situations, which are created by disequilibrium in individual's life span.

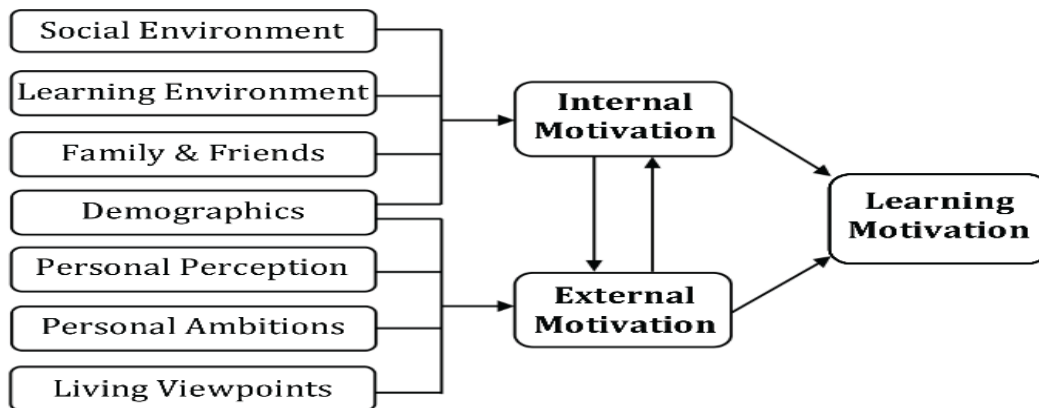
Cognitive field theories emphasis present experiences. Their approach is a situational approach to motivation and behavior. Their emphasis is on the effects of field conditions and other variables. Motivation itself could be said to be learned. Educational psychologists have always had a special interest in the relationship between learning and motivation.

On the other side learning: depends to a large extent of motivation. No matter what is learnt, the speed and efficiency would depend on motivation. Motivation is concerned with the arousal of interest in learning and is basic in learning. Motivation is effective only when it gives a mental set toward learning. Continuous motivation is needed in order to help learners concentrate on the learning material. Motivation through rewards has certain definite advantages- It is a positive approach. It also utilities the human desire for approval. Motivational factors are "activating" variables, whereas learning factors are "associative" ones. It is not easy to learn well. Describing teaching and learning as resembling a kind of "muddling through" that involves us negotiating moments of surprise as we learn our own truth about the realities of the classroom or online experience. But that doesn't mean that great teaching can't be achieved. Four core assumptions inform this book: that skillful teaching boils down to whatever helps students learn, that the best teachers adopt a critically reflective stance towards their practice are the most important knowledge we need to do good work is an awareness of how students are experiencing their own learning and our teaching, and that we should always aim to treat students as adults. To that it could be added: You can become a great teacher and that the students could easily learn from you as a teacher. Brookfield restates some of the chief insights of previous editions but interprets them for new contexts, such as online learning environments and

increasingly diverse classrooms. He uncovers what students most value in their teachers that they are authoritative allies—and explains how one can develop and demonstrate the credibility and authenticity required to fill that role. With putting the philosophy and strategies presented into action, educators can transform the unpredictable chaos of the college classroom into an environment of engaged, authentic, and successful learning [8].

### 2.1. Motivated learner

Unstated goal of teachers is to increase their students' independence and interest in learning [9]. Extrinsic motivators can be initially useful to engage reluctant learners; however, it is important not to forget that goal should be to move students towards independence and being intrinsically motivated. At a young age, children tend to react negatively to a task as 'work' when their behavior is controlled by socially imposed factors, such as rewards and rules and they tend to react positively to tasks as 'play' when there are no constraints imposed. An environment that supports students' independence facilitates change towards more self-determined, or intrinsic, motivation. Change in motivation is not an instant process but rather takes place through a number of successful experiences eventually becoming internalized. Students who expect to perform poorly often do.



*Figure 1: Learning motivation*

Positive classroom climate and teacher interaction have a profound influence on student achievement and motivation. Believe your students can learn: Teachers' beliefs about teaching and learning and the expectations they hold for students are also a powerful influence. Motivation to learn can be directly stimulated by adult and peer models as well as through direct experience. Students often assimilate motivation from those around them, even when doing so is outside their awareness. Create a learning environment that is encouraging and challenging and communicate with your students for realistic expectations. Set goals: Setting intermediate goals can be self-motivating because it allows students to feel competency as they accomplish smaller goals.

Allow independence and involve students in the learning process: Students who are involved in creating the project assignment or the project checklist gain valuable experience in setting their own goals and standards. In addition, this gives students a sense of ownership and control over their own learning. Help students to focus on the intrinsically interesting, fun and playful aspects of a task, and encourage them to make even the most routine assignment exciting. Use positive words associated with intrinsic motivation as often as possible. Words associated with intrinsic motivation include: spontaneous, challenge, interested, involved, volunteering, mastering, delighted, autonomous, absorbed, competent and enjoying. Limit the use of words associated with extrinsic motivation including: competitive, obligation, expected, evaluated, constrained, demanded, avoiding, restricted, forced, pressured, controlled and proving. Positive responses to students' questions can enhance intrinsic motivation. When a student makes an error, respond positively and guide him or her back to the correct context. Show students affection and use positive responses rather than reprimands [10]. Praise helps learners develop a feeling of competence and has been found to increase intrinsic

motivation. However, do not give vague praise, as it will lose its value. Encouragement should be given when the student is attempting to reach a goal but has not yet achieved it. Teachers should convey the message that everyone can learn and that the process of learning and developing skills is more important than gets best grades with: improvement and learning for understanding.

### 3. Motivation as a process

Motivation is one of the individual factors which affects learning. Other very important individual factors which are directly affected to learning are: maturation, attention and interest, memory, readiness and capacities, sensation and perception, will to learn, physical handicaps, defect and diseases, fatigue, mental health, food and drugs and etc. Motivation usually is defined as a process or a series of processes, which sustains us and finally give us the right way to a goal directed with sequence of behavior. Motivation is most relevant to following: Direction of behavior: goal or goals being pursued. Intensity of behavior: the amount of effort, concentration and on invested in behavior. Persistence of behavior: extent to which a goal is pursued until it is reached.

In the Figure 2 is given descriptive statistics of participants by: gender, age range, living area and school grade level. The results are briefly given in the table below.

		Frequency	Percentage
Gender	Female	273	50.84%
	Male	264	49.16%
Age range	18-20	151	28.12%
	21-22	227	42.27%
	>22	159	29.61%
Living area	Rural	239	44.51%
	Urban	298	55.49%
School-year	Freshman	62	11.55%
	Sophomore	91	16.95%
	Junior	289	53.82%
	Others	95	17.68%

*Figure 2: Descriptive statistics of participants*

Motivation originate us during our lifetime, largely through experiences involving other people, because, they are developed through personal and social contracts, these motives are referred to as personal, social or acquired motives. Some of our motives are inborn, determined by our physiological inheritance.

Research on motivation has been strongly driven by theories that overlap and contain similar concepts. A comprehensive review of this literature is beyond the scope of this report, but we highlight a few key points. Behavior-based theories of learning, which conceptualized motivation in terms of habits, drives, incentives, and reinforcement schedules, were popular through the mid-20th century. In these approaches, learners were assumed to be passive in the learning process and research focused mainly on individual differences between people (e.g., cognitive abilities, drive for achievement). These differences were presumed to be fixed and to dictate learners' responses to features in the learning environment (method of instruction, incentives, and so on) and their motivation and performance. Current researchers regard many of these factors as important but have also come to focus on learners as active participants in learning and to pay greater attention to how learners make sense of and choose to engage with their learning environments. Cognitive theories, for example, have focused on how learners set goals for learning and achievement and how they maintain and monitor their progress toward those goals. They also consider how physical aspects of the learning environment, such as classroom structures and social interactions which affects learning through their impacts on students' goals, beliefs, affect, and actions [11]. Many students experience a decline in motivation from the primary grades through high school [12]. Researchers are beginning to develop interventions motivated by theories of motivation to improve student motivation and learning. Some interventions focus on the psychological mechanisms that affect students' construal of the learning environment and the goals they develop to adapt to that environment [13]. For example, a brief

intervention was designed to enhance student motivation by helping learners to overcome the negative impact of stereotype threat on social belongingness and sense of self [14].

Usually at the end of the year, students in the growth mindset condition had significantly improved their math grades compared to students who only learned about study skills. However, the effect size was small and limited to a small subset of underachieving students [15]. The subjective and personal nature of the learner's experiences and the dynamic nature of the learning environment require that motivational interventions be flexible enough to take account of changes in the individual and in the learning environment. Over the past decade, a number of studies have suggested that interventions that enhance both short- and long-term motivation and achievement using brief interventions or exercises can be effective.

In the table or figure 3 are given results of Linear regression analyses. When we analyzed the results given for standardized coefficients and significance level, we can easily conclude that: family and friends with standardized coefficient 0.721, learning environment 0.798, living area 0.712 and external 0.698 and internal motivation 0.682 are most important factors for motivation for learning.

Dependent variable	Independent variable	Std. Coefs.(*)	Sig.(**)
External motivation	Social environment	0.528	0.012
	Family and friends	0.721	0.018
	Learning environment	0.798	0.023
	Living area	0.712	0.041
Internal motivation	Personal Perception	0.624	0.032
	Personal Ambitions	0.645	0.014
	Living viewpoint	0.561	0.033
Learning motivation	Living area	0.147	0.029
	External motivation	0.698	0.000
	Internal motivation	0.682	0.000

Notes: \* Standardized coefficients; \*\* Significance level

Figure 3: Linear regression analyses

The effectiveness of brief interventions appears to stem from their impact on the individual's construal of the situation and the motivational processes they set in motion, which in turn support longer-term achievement. Brief interventions to enhance motivation and achievement appear to share several important characteristics. First, the interventions directly target the psychological mechanisms that affect student motivation rather than academic content. Second, the interventions adopt a student-centric perspective that takes into account the student's subjective experience in and out of school. Third, the brief interventions are designed to indirectly affect how students think or feel about school or about themselves in school through experience, rather than attempting to persuade them to change their thinking, which is likely to be interpreted as controlling. Fourth, these brief interventions focus on reducing barriers to student motivation rather than directly increasing student motivation. Such interventions appear particularly promising for African American students and other cultural groups who are subjected to negative stereotypes about learning and ability. However a note of effectiveness on these interventions appears to depend on both context and implementation [16]. Studies such as these are grounded in different theories of motivation related to the learners' cognition, affect, or behavior and are intended to affect different aspects of motivation [17].

However, this meta-analysis was small: only several hundreds of published and unpublished papers met criteria for inclusion, and the included studies involved a wide range of theoretical perspectives, learner populations, types of interventions, and measured outcomes. These results are not a sufficient basis for conclusions about practice, but further research may help identify which interventions work best for whom and under which conditions, as well as factors that affect implementation (dosage, frequency and timing).



#### 4. Conclusion

Motivation to learn is influenced by the multiple goals that individuals construct for themselves as a result of their life and school experiences and the socio-cultural context in which learning takes place. Motivation to learn is fostered for learners of all ages when they perceive the school or learning environment is a place where they “belong” and when the environment promotes their sense of agency and purpose. Theory and research support the important role of self-efficacy in learning, motivation and self-regulation. Self-regulation has several definitions, hence this article opens with a discussion of definitions. Self-regulation is a construct that represents development of children's abilities to follow the everyday norms and practices that are embraced by their parents. Self-regulation is an intrinsic part of the socialization process. Research findings have provided insights about the role of caregiver and child factors in effective self-regulation. From instructional and social and environmental sources, students gain information that affects their self-efficacy and in turn, self-efficacy influences various achievement behaviours. The operation of self-efficacy in education contexts will continue to be clarified as researchers investigate such issues as the generality of self-efficacy measures, how students' capabilities to process self-efficacy information changes with development, how self-efficacy functions in different cultures, and the role of self-efficacy in learning from technology.

Professors must support the learners' motivation by attending their engagement, persistence and performance by:

- Helping them to set desired learning goals and appropriately challenging goals for performance;
- creating learning experiences that they value;
- Supporting their sense of control and autonomy;
- Developing their sense of competency by helping them to recognize, monitor and strategize about their learning progress and
- Creating an emotionally supportive and nonthreatening learning environment where learners feel secure and valued.

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**Publisher:** Military academy “Mihailo Apostolski”, Skopje, www.ma.edu.mk

**Editors:** Dr Sc Jugoslav ACHKOSKI, Associate professor,  
Dr Sc Biljana KAROVSKA – ANDONOVSKA, Associate professor

**Proofread:** Elena TRAJANOVSKA

**Content edited by:** Kristijan ILIEVSKI

**Cover page design:** Aner BEHLIC

**Copies:** 100

**Printed by:** Art Print Studio

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CIP - Каталогизација во публикација  
Национална и универзитетска библиотека "Св. Климент Охридски", Скопје

355.45(062)

INTERNATIONAL Scientific Conference MILCON'19 (2019 ; Skopje) (2)  
Proceedings of papers / 2-nd International Scientific Conference  
MILCON'19, Skopje. - Skopje : Military academy "Gen. Mihailo  
Apostolski", 2019. - 243 стр. : илустр. ; 24 см

Фусноти кон текстот. - Библиографија кон трудовите

ISBN 978-9989-134-10-4

а) Национална безбедност - Собири  
COBISS.MK-ID 111434250

**Published by**  
MILITARY ACADEMY  
"GENERAL MIHAILO APOSTOLSKI"



ISBN 978-9989-134-10-4