MOTIVATION TO LEARN ONLINE DURING AND AFTER THE COVID-19 PANDEMIC

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ABSTRACT: The research aims to define the model and the role of motivation to learn in the online classrooms. As online courses become prevalent during the present pandemic caused by COVID-19, it is very important to search for the answers to the following questions: How can instructors design their online courses to optimize student motivation? And how can students identify and take advantage of motivational strengths in online courses? The modified version of the Motivation to Learn Online Questionnaire (MLOQ) was used to assess college students' motivation to learn during online classes. The MLOQ is adapted, in part, from the Motivated Strategies for Learning Questionnaire (MSLQ) and it was designed to assess the following dimensions: intrinsic and extrinsic goal orientation, self-efficacy and task value. These factors are based on a general cognitive view of motivation and are well-documented as influencing the quality of instruction in a traditional classroom, but they might function differently in online learning environments. Two other constructs: instructor support and social engagement are part of the MLOQ since they are relevant to the motivation to learn online. The sample consists of 184 university students recruited from 30 different online courses taught at two private universities in Skopje, the International Balkan University and University American College Skopje. Results from the confirmatory factor analysis show that the hypothesized 6-factor model has an acceptable fit to the data from this research and it can be considered when determining the optimal approach to online learning.

KEYWORDS: *motivation to learn, online learning, autonomy, competence, relatedness, self-determination theory*

INTRODUCTION

The Covid-19 pandemic has raised significant challenges for higher education worldwide. A specific challenge has been the urgent and unexpected request for previously face-to-face university courses to be taught online. The term 'online learning' is broadly used but with a variety of meanings. For the purposes of this research, online learning refers to learning that is mediated by the Internet. More specifically, online learning refers to a type of teaching and learning situation in which (1) the learner is at a distance from the instructor, (2) the learner uses some form of technology to access the learning materials, (3) the learner uses technology to interact with the instructor and with other learners and (4) some kind of support is provided to learners (Anderson, 2011). Online learning and teaching involve a diverse array of tools, resources, pedagogical approaches, roles, organizational arrangements, and forms of interaction, monitoring and support—with many possible combinations of substitution and integration (Bullen and Janes, 2007; Bach, Haynes and Smith, 2007). In fact, online instruction has resulted in the student teacher relationship becoming less personal. Teachers are required to turn the classroom into an online environment. The question is what exactly is required of teachers to motivate students in an online environment?

Simply defining motivation is the most difficult task for theorists on motivation. Motivation represents a theoretical term explaining why people decide to act in a certain way at a specified moment in time (Beck, 2003). An essential aspect of motivation is setting up a direct and intense relationship between the goals, actions taken and end results. The results have a subjective meaning and psychological value to the individual as, conversely, they are less potent as active motivators. For that reason it is believed that motivation is a function of the expected results and the psychological value prescribed to them (Eccles and Wigfield, 2002).

A special kind of motivation is the motivation to learn and it is defined the 'state in which a person is intrinsically motivated to learn, has a motif to gain knowledge'. Thus, said student has a tendency to experience academic activities as comprehensive and adds value to them as a means to reach academic success (Benček and Marenić, 2006). Overall learning motivation is a permanent and wide disposition, or leaning towards acquiring knowledge and skills in different learning situations. In that sense, motivation is stable – once developed it lasts a lifetime and it depends upon the student and their learning experience.

Research indicates that motivation to learn plays a strong role in fostering academic success. Motivated students engage with subject matter for longer periods of time, display more persistence when encountered with adversity, and achieve at higher levels than do students who are less motivated (Bandura, 1997). Much of the work on motivation in learning has been conducted in a traditional classroom settings. How motivation operates within online learning environments is not as well understood. Hence, the following questions arise: Does motivation in online classrooms differ from traditional classrooms? How can instructors design their online courses to optimize student motivation? How can students identify and take advantage of motivational strengths in online courses? As online courses become more prevalent and the understanding of the influence of motivation in such learning environments becomes more grounded, teachers, researchers, and students need an effective measurement tool to answer these questions and assess student motivation. The Self Determination Theory

and its sub theories are taken into consideration in order to have a better approach when answering these questions.

SELF DETERMINATION THEORY

Self-determination theory is a motivational theory pioneered by Edward L. Deci and Richard M. Ryan. The foundational assertion of the theory is that human motivation is driven by the satisfaction of three basic psychological needs: autonomy, competence, and relatedness (Ryan and Deci, 2000). Satisfaction of these needs is predictive of individual motivation. Settings in which these needs are satisfied produce greater individual motivation. Conversely, settings in which these needs are undermined or thwarted produce amotivation or disaffection in the affected individuals (Deci and Ryan, 2008).

AUTONOMY

Deci and Ryan's notion of autonomy focuses on the perceived locus of causality for the individual's action. For any given action, there are a number of internal and external factors that influence the engagement in the action. Internal factors - such as the desire to succeed, the desire to be perceived a certain way, or the simple pleasure of engaging in an activity – all have an internal perceived locus of causality. External factors – such as social pressures, forced behaviors, and coercion – all have an external perceived locus of causality (Deci and Ryan, 1985).

Though it has been contested, one of the major findings in this theory is that the proffering of extrinsic rewards for intrinsically motivated behaviors undermines intrinsic motivation (Deci, Koestner, and Ryan, 1999). This finding serves as one of the primary pieces of evidence in support of the role of autonomy as a necessary determinant of motivation in self-determination theory. The causal

mechanism underlying the demotivating effects of extrinsic rewards is the shift in perceived locus of causality. When an individual is intrinsically motivated to perform a behavior, there is an internal locus of causality driving the behavior. As extrinsic rewards are introduced, the locus of causality becomes externalized, reducing the intrinsic motivation. Essentially, the introduction of extrinsic rewards takes a situation in which the individual performs the action for its own sake and turns it into a situation in which the individual is likely to feel coerced or manipulated (Deci and Ryan, 2008).

Studies have also found evidence suggesting that autonomy refers to the individual's ability to direct his or her own time and attention within a particular task. Research supports this idea, with intercultural studies finding that increased autonomy supports increased intrinsic motivation to perform a task, regardless of culture (Ryan and Deci, 2020).

COMPETENCE

Within the self-determination theory framework, competence refers to the individual's perceived effectiveness at performing a particular task. This concept differs from similar concepts, such as Bandura's self-efficacy. While self-efficacy is domain-specific, the self-determination theory notion of competence is task-specific. However, the two concepts are similar in that they refer to the perception of one's own abilities. This is important because much of the self-determination theory research on competence is based on the role external factors play in influencing that perceived effectiveness. Some of Deci's early research focused on the role of external rewards on intrinsic motivation. In a 1971 study, he found that when money was used as an extrinsic reward, it decreased intrinsic motivation. However, when praise was used as an extrinsic reward, it

actually increased motivation (Deci, 1975). Further research has confirmed this finding, though verbal rewards used in a controlling manner have been shown to undermine intrinsic motivation (Koestner, Zuckerman, and Koestner, 1987).

Deci and Ryan went on to theorize positive feedback - unlike tangible forms of extrinsic reward – fosters intrinsic motivation because it can increase the perceived competence of the individual being praised (Deci, Koestner, and Ryan, 1999). Other researchers have found praising the individual's efforts rather than abilities is more effective at increasing intrinsic motivation because the praise brings focus on a factor within the individual's control (Mueller and Dweck, 1998). Furthermore, studies have found evidence indicating negative verbal feedback diminishes intrinsic motivation, further supporting Deci and Ryan's position that perceived competence and autonomy influence motivation (Osbaldiston and Sheldon, 2003).

RELATEDNESS

Though it may be construed to pertain to a general sense of belonging, the self-determination theory concept of relatedness refers primarily to close personal relationships (Baumeister and Leary, 1995). Ryan and Deci contend relationships like those with romantic partners and close friends play a fundamental role in creating the environment necessary for the expression and exploration of intrinsically motivated behaviors. Furthermore, Ryan and Deci (2000) state high-quality personal relationships do not just satisfy the need for relatedness, but also the need for autonomy and competence as well.

Cognitive evaluation theory is sub-theory of self-determination theory that focuses on intrinsic motivation. Specifically, cognitive evaluation theory focuses on

the role of autonomy and competence as factors that explain the variability in intrinsic motivation (Deci and Ryan, 1985). Deci and Ryan view intrinsic motivation as the desire to engage in a specific behavior "for its own sake," and consider it to be a naturally occurring state that will arise given the proper conditions. From this perspective, cognitive evaluation theory is the study of the conditions that facilitate intrinsic motivation, as well as those that inhibit it.

Some of the fundamental ideas underlying cognitive evaluation theory are based on research finding optimal challenges and positive feedback promote intrinsic motivation, while negative feedback diminishes intrinsic motivation (Deci, Koestner and Ryan, 1999). The causal mechanism for these findings is hypothesized to be perceived self-competence. Additionally, researchers have found that the effects of both positive and negative feedback are mediated by perceived self-competence (Vallerand and Reid, 1984). However perceived self-competence alone is not sufficient to create the optimal conditions for intrinsic motivation.

Autonomy is needed as well. One of the most significant – and most contested – aspects of cognitive evaluation theory is the finding that all tangible rewards suppress intrinsic motivation (Deci, Koestner and Ryan, 1999).

Organismic integration theory, sub-theory of self-determination theory focuses on extrinsic motivation. Self-determination theory defines extrinsic motivation as the urge to perform an activity in order to achieve an outcome (Ryan and Deci, 2000). Based on the findings from numerous studies, extrinsic motivation is generally regarded as less effective than intrinsic motivation. Research indicates that those involved in extrinsically motivated behaviors typically report lower levels of engagement (Froiland

and Oros, 2014), expend less effort than their intrinsically motivated counterparts (Dysvik and Kuvaas, 2013), devote less time on the task then their intrinsically motivated counterparts (Ryan and Connell, 1989), and display lower levels of persistence (Ryan, Kuhl, and Deci, 1997). However, extrinsic motivation is generally more pervasive in common social environments like workplaces and classrooms because it can be fostered by external agents, such as employers and teachers. For this reason, there is great interest in understanding extrinsic motivation and identifying ways to optimally utilize it.

Self-determination theory posits that there are varying degrees of extrinsic motivation, there are four subcategories. They are external regulation, introjected regulation, identified regulation, and integrated regulation. A number of characteristics vary between these categories of extrinsic motivation, but the primary determinant is the perceived locus of causality. At the extrinsic end of the scale is external regulation, in which the locus of causality is external. At the intrinsic end of the scale is integrated regulation, in which the locus of causality is internal. As individuals internalize the motivational factors driving specific behaviors, they become more engaged and their behavior begins to more closely resemble the behaviors of intrinsically motivated individuals (Ryan and Deci, 2000). Since the formulation of this framework, a number of studies have confirmed that extrinsic motivation featuring more internalized loci of causality produces higher quality outcomes (Vallerand and Bissonnette, 1992).

According to the Self-Determination theory, **goal orientation** is an essential component of motivation. To be motivated is to be motivated toward something (Ryan and Deci, 2000). That something is a goal. Goal orientation refers to

the types of goals that motivate students – in particular, the direction from which those goals originate. There are two general types of goals: intrinsic goals and extrinsic goals (Vansteenkiste, Niemiec, and Soenens, 2010).

Intrinsic goals are those that originate from within the individual. Goals that fall under this category include satisfaction, mastery, and the pleasure derived from simply being engaged in an activity. Intrinsic goals are often referred to as mastery goals. Extrinsic goals are those goals that originate from outside the individual. Examples of extrinsic goals include money, social recognition, grades, and avoidance of punishment. Extrinsic goals often take the form of rewards and are sometimes referred to as performance goals.

Generally, it is believed that intrinsic goals are more productive than extrinsic goals (Ryan and Deci, 2000). This is because research indicates that, while extrinsic goals are capable of affecting changes in behavior, those changes are only temporary. Students who change their behavior to reach extrinsic goals often revert to the original behavior after the promise of the extrinsic reward is removed. Furthermore, some research suggests that the application of extrinsic rewards to a task for which the individual is intrinsically motivated can actually undermine intrinsic motivation (Deci and Ryan, 2008). On the other hand, intrinsic goals are believed to be capable of affecting long-term changes in behavior, as well as fostering greater persistence toward achievement. It would seem that intrinsic goals are inarguably superior to extrinsic goals, but there is a tradeoff. Intrinsic goals are difficult to cultivate. Because intrinsic goals originate from within the individual, external agents, such as teachers, have little control over them. Conversely, extrinsic goals are much easier to control. As a result, much

of the motivation that occurs in the classroom focuses on extrinsic goals. More successful teachers though, promote student performance by providing extrinsic motivation while fostering the development of intrinsic goals (Ryan and Deci, 2000).

Relationships motivation theory as a sub-theory of self-determination theory focuses on the importance of human relationships in needs satisfaction and overall wellbeing. Relationships act as the primary mechanism through which satisfaction of the three basic needs is mediated. The most apparent of these is the satisfaction of the need for relatedness. When individuals feel a sense of relatedness, it is with the other individuals with whom they interact, as well as with overall organizations and social groups, such as workplaces and classrooms. But needs satisfaction is not limited just to relatedness. Autonomy and competence are also satisfied through relationships (Ryan and Deci, 2020).

In fact, research suggests autonomy and competence contribute to healthy relationships independently of relatedness (La Guardia, Ryan, Couchman, and Deci, 2000). Humans are social animals. Every individual maintains relationships with others in a variety of different capacities – siblings, parents, romantic partners, children, bosses, coworkers, teachers, etc. Through these relationships, individuals get both verbal and nonverbal feedback on competence in a variety of domains. Information contained in interactions with others is used to gauge performance, which, in turn, colors self-perception. This applies to autonomy as well. Individuals that interact with each other behave in ways that either support or undermine autonomy. Though feedback on autonomy and competence can come from other sources, such as self-evaluation and structural feedback, relationships are the fundamental conduit through which needs satisfaction occurs.

Task value refers to the individual's subjective perception of the value of a particular task. Much of the work on task value is based on the Expectancy-Value framework of motivation developed by Eccles (Wigfield, 1994). Eccles identified four primary factors in task value: attainment value, intrinsic value, utility value, and cost (Eccles and Wigfield, 2002). Attainment value is defined as, "the importance of doing well on a given task" (Wigfield and Eccles, 2000).

Intrinsic value is defined as the enjoyment from engagement in the task itself. Utility value refers to the perceived usefulness of the task. And cost refers to the perceived opportunity cost of engaging in the task, as well as the perceived resources spent and emotional cost of engaging in the task. Researchers have identified relationships within those factors, as well as relationships with other motivational constructs. For instance, attainment value and intrinsic value have been shown to be correlated with one another, as well as with intrinsic motivation (Harackiewicz, Durik, Barron, Linnenbrink and Tauer, 2008). Utility value, with its focus on external factors, is more closely associated with extrinsic motivation (Wigfield and Eccles, 2000).

In the Expectancy-Value framework, task value is one of two factors involved in motivation. The other is expectancy. Essentially, expectancy refers to the individual's beliefs about her ability to perform the task. This is similar to the notion of self-efficacy. Task value has been shown to be closely associated with activity choice, though achievement in the task is more closely associated with self-efficacy (Pintrich, 2004).

Additionally, task value is malleable. For instance, with academic tasks, many college students attempt to increase task value by increasing the relevance of the tasks to other aspects of their lives. In situations such as these, students are

compensating for lack of intrinsic value by creating more attainment and utility value for the task (Eccles and Wigfield, 2002).

INSTRUCTOR SUPPORT

The modern classroom is built around the relationship between instructors and students. The premise of the classroom structure is that the instructor is the arbiter of knowledge and the classroom is an environment designed for the instructor to impart that knowledge to the students. As such, it is not surprising that instructor support plays a pivotal role in student success (Fowler, 2018). From the self-determination theory perspective, instructors facilitate or thwart motivation by creating an environment that impacts all three of the basic psychological needs. Instructors can encourage autonomy satisfaction by engaging in behaviors that promote autonomy, such as offering choices in assignments and tailoring instruction or assignments to student interests. By interacting with students in autonomy-supportive ways, instructors can create classroom conditions that make students comfortable enough to engage in agentic behaviors, such as asking questions and communicating their opinions (Jang, Kim and Reeve, 2012). Instructors can also refrain from offering controlling or manipulative feedback, praising effort rather than performance, and offering rewards that support an internal, rather than an external, locus of causality. Instructors can influence perceived competence by communicating in ways that acknowledge student effort when answering questions, providing feedback on assignments, and encouraging student inquiry.

Instructors can support relatedness by establishing an emotional connection with students through the nature of their classroom interactions. In a classroom environment, relatedness refers not just to the teacher's relationships with the students, but also to the atmosphere that the teacher creates.

Engagement plays a significant role in the instructor/student dynamic. Reeve (2009) presents a model explaining the relationship between motivation and engagement in the classroom. In this model teachers engage in behaviors that facilitate student motivation. Motivation then leads to engagement. When signs of that engagement are validated by the teacher and students, it increases motivation and, therefore, engagement. When engagement is not socially validated by teachers or peers, it undermines motivation by decreasing the sense of relatedness in students. In this model, signs of student engagement provide a feedback loop for teachers, helping to guide the tone and nature of the instruction. Using the information provided in this feedback, teachers can ensure that students stay engaged and achieve optimal outcomes. In the traditional classroom, these signs of engagement are well-established. Attentive gaze, posture, tone of voice, active questioning - these are among the signs that teachers use to assess student engagement (Reeve, 2009).

In the online classroom these signs of engagement are typically not available. The teacher is often like a singer performing to an empty room (Fowler, 2018). The difference in instructional support between online and traditional classrooms could have a significant impact on the quality of instruction, student motivation, and learning outcomes. For instance, Jaggars (2014) found that perceived greater levels of instructor support played a part in community college students' preference for traditional courses over online courses. Without the ability to assess student engagement, it is challenging for the instructors of online courses to gauge the quality of their instruction and make the necessary adjustments.

SOCIAL ENGAGEMENT

The learning environment is an ongoing interplay of personalities. It is a collectively defined space in which instructors and students engage with one another, giving shape to the environment through their interactions. The collective nature of the classroom has a powerful impact on motivation. When viewed from the perspective of both social cognitive theory and self–determination theory, motivation is not a factor that exists only within the individual but is rather the product of an ongoing interaction between the individual and the environment. In educational settings, that environment is the classroom. In the traditional classroom, the social dynamics that affect motivation are fairly well researched and understood. However, the introduction of a new social context – in the form of online classrooms – introduces the need for additional research, to understand how that environment affects social dynamics and, in turn, motivation and related educational outcomes (Fowler, 2018).

Though both online and traditional classrooms are structured and conducted in a variety of ways, there are a number of differences between the two that could have a considerable impact on motivation. These differences are related to the limited interactions afforded by an online environment. Individual attitudes toward academic achievement are influenced by the attitudes of the social groups to which the individual belongs (Urdan and Schoenfelder, 2006). However, participants in online courses are often geographically disparate. In addition to not being in the same physical classroom, students and instructors are often not in the same town, state, or sometimes even the same country. Opportunities for interactions outside of the classroom are often limited. Lack of proximity reduces the opportunity for informal interactions, which often form the foundation of social relationships. Frequently, social bonds are formed and strengthened through side–conversations and informal interactions that occur before, during, or after class. Opportunities for these interactions are typically limited or non–existent in the online classroom.

The format of communication in online classrooms might also affect student engagement and motivation. Communication in most online courses is restricted to text and audio, which are often used in a limited capacity. The limited format of interaction in online courses presents a dramatic departure from the online classroom. A few of the many elements of the traditional classroom missing in most online classrooms are body language that conveys empathy or understanding, tone of voice that conveys sarcasm, and subtle jokes that highlight shared frustrations. Though seemingly superficial and not related to the formal pedagogical structure of the classroom, these sorts of interactions contribute to the dynamics of a learning environment and their absence likely impacts student motivation (Fowler, 2018).

Perhaps the most significant impact of the limited social interaction in the online classroom is that students will not have the opportunity to have their basic needs supported if they are not interacting with fellow students, according to the basic psychological needs sub theory of self–determination theory (Ryan and Deci, 2000).

METHOD

PARTICIPANTS

The participants in this study consisted of 184 students in total (Appendix 1), recruited from 30 different online courses taught at two private universities in Skopje, the International Balkan University (106 students) and University

American College Skopje (78). Participants were recruited through the assistance of the instructors of those courses. The researcher sent an email to instructors, requesting that they send a notification with details about the study to their students. Participation was voluntary and anonymous. No incentives were offered for participation in the study. Participants were asked to indicate the title of online course. The recruitment email was sent to the instructors of all of the online courses offered at the universities during spring semester, 2021.

INSTRUMENT AND VARIABLES

A modified version of the Motivation to Learn Online Questionnaire (MLOQ) was used (Fowler, 2018). It consists of 34 questions comprising six subscales, each designed to assess a different facet of motivation in online courses. Students indicate how true these 34 statements are of them, using a 7-point Likert-type scale. For each question there is an item stem, which is a statement prompting participants to indicate their level of agreement regarding their experience's online classes with a Likert scale. The Likert scale ranges from one to seven, with the following values: 1 = not at all true of me, and 7 = very true of me. For one item, reverse coding was employed.

Among the six subscales of the MLOQ, four subscales were adapted from the Motivated Strategies for Learning Questionnaire (MSLQ). The MSLQ (Pintrich, Smith, García and McKeachie, 1993), is a widely used tool for educators and researchers interested in assessing student motivation and 34 cognitive strategy use. To some degree, the popularity of the MSLQ might be attributed its availability in the public domain. The freedom to modify the MSLQ to suit individual needs has also contributed to its popularity. Analyses of the MSLQ indicate it has high reliability and predictive validity

(Pintrich, 1999). This research was focused on four of the six MSLQ subscales: intrinsic goal orientation, extrinsic goal orientation, task value, and self-efficacy.

Two additional subscales were created for the MLOQ (Fowler, 2018). These scales are the social engagement and instructor support subscales. Many theories, particularly social cognitive theory (Bandura, 2001), emphasize the role environment and social involvement play in motivation. The social engagement subscale is intended to assess levels of social engagement in online and traditional classes and was added because the opportunities for social interaction in online classes and the methods through which such opportunities take place are dramatically different from traditional classes. Additionally, the instructor support subscale was designed to assess student perception of both emotional and practical support from the instructor.

Intrinsic goal orientation concerns the degree to which the students perceive themselves to be participating in a task for reasons such as challenge, curiosity, and mastery. Having an intrinsic goal orientation towards an academic task indicates that the student's participation in the task is an end all to itself, rather than participation being a means to an end.

Intrinsic goal orientation is measured through a score expressed in the scale called Intrinsic goal orientation (Fowler, 2018).

The scale is consisted of four different claims:

- I prefer material that really challenges me, so I can learn new things.

- I prefer material that arouses my curiosity, even if it's difficult to learn.

- The most satisfying thing for me is trying to understand the content as thoroughly as possible.

- I choose assignments that I can learn from even if they don't guarantee a good grade.

Students indicate how true 4 statements are of them, using a 7–point Likert–type scale. The higher score points to a more accentuated intrinsic goal orientation.

Extrinsic goal orientation complements intrinsic goal orientation and concerns the degree to which the student perceives themselves to be participating in a task for reasons such as grades, rewards, performance, evaluation by others, and competition. When one is high in extrinsic goal orientation, engaging in a learning task is the means to an end. The main concern the student has is related to issues that are not directly related to participating in the task itself (such as grades, rewards, comparing one's performance to that of others).

Extrinsic goal orientation is measured through a score expressed in the scale called Extrinsic goal orientation (Fowler, 2018).

The scale is consisted of four different claims:

- Getting a good grade is the most satisfying thing for me.

- The most important thing for me is to improve my overall grade point average, so my concern is getting a good grade.

- I want to get better grades than most of the other students in my courses.

- I want to do well in my courses because it's important to show my ability to my family, friends, employer, or others.

Students indicate how true 4 statements are of them, using a 7–point Likert–type scale. The higher score points to a more accentuated extrinsic goal orientation.

Task value differs from goal orientation in that task value refers to the student's evaluation of the how interesting, and how useful the task is ("What do I think of this task?"). Goal orientation refers to the reasons why the student is participating in the task ("Why am I doing this?"). High task value should lead to more involvement in one's learning. Task value refers to students' perceptions of the course material in terms of interest, importance, and utility.

Task value orientation is measured through a score expressed in the scale called Task value (Fowler, 2018).

The scale is consisted of four different claims:

- I think I will be able to use what I learn in this course in other courses.

- It is important for me to learn the course material in this class.

- I am very interested in the content area of this course.

- I think the course material in this class is useful for me to learn.

- I like the subject matter of this course.

- Understanding the subject matter of this course is very important to me.

Students indicate how true 6 statements are of them, using a 7–point Likert–type scale. The higher score indicates to a positive appreciation of the course material in terms of interest, importance, and utility.

Self–Efficacy, the items comprising this scale assess two aspects of expectancy: expectancy for success and self–efficacy. Expectancy for success refers to performance expectations, and relates specifically to task performance. Self–efficacy is a self–appraisal of one's ability to accomplish a task as well as one's confidence in one's skills to perform that task.

Self-efficacy is measured through a score expressed in the scale called Self-Efficacy (Fowler, 2018).

The scale is consisted of eight different claims:

- I believe I'll receive excellent grades in my courses.

- I'm certain I can understand the most difficult material presented in the readings.

- I'm confident I can learn the basic concepts that are being taught.

- I'm confident I can understand the most complex material presented by the instructor.

- I'm confident I can do an excellent job on assignments and tests.

- I expect to do well in my courses.

- I'm certain I can master the skills being taught.

- Considering the difficulty of the courses, the teachers, and my skills, I think I can do well.

Students indicate how true 8 statements are of them, using a 7-point Likert-type scale. The higher score points to a higher evaluation of one's ability to accomplish a task as well as one's confidence in one's skills to perform that task.

Social Engagement refers on the opportunities for social interaction in online classes. Is measured through a score expressed in the scale called Social Engagement (Fowler, 2018).

The scale is consisted of five different claims:

- I feel "disconnected" from my teacher and fellow students in online classes.

- I pay attention in online classes.

- I enjoy online class discussions.

- I feel like I can freely communicate with other students in online classes.

- I have strong relationships with fellow students in this course.

Students indicate how true 5 statements are of them, using a 7-point Likert-type scale. The higher score points higher levels or social engagement in online classes.

Instructor Support refers on a student perception of both emotional and practical support from the instructor. It is measured through a score expressed in the scale called Instructor Support (Fowler, 2018).

The scale is consisted of seven different claims:

- I feel like I can freely communicate with the instructor in this course.

- The instructor responds to questions, clearly, completely, and in a timely manner.

- The instructor's expectations for me in this course are clear.

- The instructor provides the guidance I need to be successful in this course.

- The instructor presents the material in a way that makes it relevant to me.

- In this course, I have the freedom to guide my own learning.

- The instructor provides regular feedback that helps me gauge my performance in this course.

Students indicate how true 7 statements are of them, using a 7-point Likert-type scale. The higher score points to higher levels of positive emotional and social support from the instructor.

PROCEDURE

The MLOQ was administered entirely online through a web-based platform Google Forms (https://docs.google.com/forms/d/1MmnmrxyDCb3OFlJXv0iP-7juT_Asm_AhCX2U85olr3kE/edit). Participants accessed the questionnaire by entering the Internet address provided by the researcher into their web browser. The questionnaire was open and available during the months of March and April, 2021.

RESULTS

DESCRIPTIVE STATISTICS

Statistical analyses were performed on the data, using Statistical Package for the Social Sciences (SPSS) version 21.0, to assess the items and scales of the Motivation to Learn Online Questionnaire.

Reliability estimates and descriptive statistics were calculated for each subscale. Using SPSS, Cronbach's alpha was calculated as a measure of reliability for each subscale, with values of 0.7 or greater considered satisfactory indicators of reliability. Of the six subscales, only one – Intrinsic Goal Orientation – fell below the 0.70 threshold for Cronbach's alpha, with a coefficient of 0.65. Table 1 contains a summary of the reliability statistics. Below is an overview of the relevant statistics for each subscale.

The Intrinsic Goal Orientation subscale consisted of 4 items, and reliability analysis yielded a coefficient alpha of 0.65. The individual item means ranged from 4.80 to 5.71 (M = 5.27; SD = 1.06). The Extrinsic Goal Orientation subscale consisted of 4 items, and reliability analysis yielded a coefficient alpha of 0.77. The individual item means ranged from 3.84 to 4.88 (M = 4.48; SD = 1.39). The Self-efficacy subscale consisted of 8 items, and reliability analysis yielded a coefficient alpha of 0.90. The individual item means ranged from 4.73 to 5.91 (M = 5.45; SD = 1.33). The Task Value subscale consisted of 6 items, and reliability analysis yielded a coefficient alpha of 0.93. The individual item means ranged from 5.19 to 5.59 (M = 5.33; SD = 1.06). The Social Engagement subscale consisted of 5 items, and reliability analysis yielded a coefficient alpha of 0.70. The individual item means ranged from 3.84 to 5.04 (M = 4.34; SD = 1.25). The Instructor Support subscale consisted of 7 items, and reliability analysis yielded a coefficient alpha of 0.94. The individual item means ranged from 5.24 to 5.80 (M = 5.48; SD = 1.35).

Table 1

Descriptive statistics

Scale	Mean	Standard deviation	Minimum	Maximum	Cronbach Alpha
Intrinsic Goal Orientation	5.27	1.06	1.75	7.00	0.65
Extrinsic Goal Orientation	4.48	1.39	1.00	7.00	0.77
Task Value	5.33	1.06	1.83	7.00	0.93
Self-Efficacy	5.45	1.33	2.00	7.00	0.90
Social Engagement	4.34	1.25	1.20	7.00	0.70
Instructor Support	5.48	1.35	1.14	7.00	0.94

CONSTRUCT VALIDITY

Construct validity refers to the degree to which an instrument measures what it claims, or purports, to be measuring. Confirmatory factor analysis with AMOS (Analysis of Moment Structures) software was chosen as the method to provide evidence of the construct validity of the Motivation to Learn Questionnaire. A confirmatory factory analysis was performed to determine if the proposed motivational factors explain the shared variance in the items that are intended to measure those factors.

Three indices are used, the Model Chi Square, Root Mean Square Error of Approximation (RMSEA) and the Comparative Fit Index (CFI) to evaluate overall model fit (Steiger, 1990). Chi -Square goodness of fit hypothesis that the population covariance matrix is equal to the model-based estimated covariance matrix; Chi-Square (CMIN) statistic divided by degrees of freedom should be within acceptable limit of 3 or less. The RMSEA assesses the discrepancy between the model implied covariance (correlation) matrix and the observed covariance (correlation) matrix by taking into account the degrees of freedom or number of free parameters required to achieve a given level of fit. Values in the range of 0 to 0.08 for RMSEA reflect acceptable error, whereas values greater than 1would suggest serious problems with the model. The CFI compares the fit of a target model to the fit of an independent, or null, model; values of 0.9 to 1 indicate good fit (Browne and Cudek, 1993; Vandenberg, 2006). The statistics for the proposed model of six latent motivational factors: Intrinsic Goal Orientation (IGO), Extrinsic Goal Orientation (EGO), and Task Value (TV), Self-efficacy (SEF), Social Engagement (SE) and Instructor Support (IS) upon checking modification indices present acceptable model fit (Chi-square = 953.803; Degrees of freedom = 503,

CMIN/DF=1.9; CFI = 0.90 and RMSEA = 0.07), indicating that construct validity was achieved. Figure 1 provides a visual overview of the model used in the factor analysis (Appendix 2).

DISCUSION

This research was developed with two aims. The first was to establish a model of motivational factors that have to be considered when determining the optimal approach to online learning and the second was to further understand motivation to learn in online classrooms. The results of the confirmatory factor analysis indicate that the proposed theoretical model does fit (acceptable) the data from this research, thus provide evidence of construct validity for the instrument. The goodness of fit indices are quite reasonable values, given the fact of a broad range of courses and subject domains. Motivational attitudes may differ depending upon course characteristics. Overall model show sound structures and reasonably factor validity of the Motivation to Learn Online Questionnaire scales.

The reliability of the instrument was well-established. The Cronbach's alpha coefficients for the subscales ranged from 0.65 to 0.94, with only one subscale, Intrinsic Goal Orientation, falling below the 0.70 threshold for strong reliability.

Concerning the second aim – to further understand motivation to learn in online courses – there are two notable findings. The first is the relatively high mean score for Instructor Support. It was hypothesized that Instructor Support scores would be low in relation to the other subscales, because the traditional methods of instructor support are largely absent in the online classroom. However, the Instructor Support subscale recorded the highest scale mean (M = 5.48) in the inventory. However, this finding may have been influenced by the fact that student

recruitment occurred through participating instructors. Participating students may have been biased toward positive marks as a result. Additionally, selection bias may be at play, with unmotivated students less likely to complete the questionnaire. A study that recruits from a wider, more diverse population without involving instructors is necessary to further study instructor support.

The second social support finding is that the Social Engagement scale mean was the lowest in the inventory. This was an expected outcome. While not conclusive, this supports the hypothesis that the lack of social engagement methods available in a traditional classroom present an obstacle to social engagement online. From the perspective of Self–Determination Theory, this presents an obstacle to motivation. Not only does relatedness play a key role in motivation, relatedness is also the method though which autonomy and competence are mediated. Interpersonal relationships serve as a mechanism through which perceptions of autonomy and competence are either disputed or confirmed.

CONCLUSIONS

It is essential for teachers to understand their students' motivations. The success or failure of online instruction is perhaps related to student motivation. To stimulate students, teachers should: 1. Keep in mind that motivation must be natured in students. 2. Explain to their students how the online environment may be used. 3. Encourage interaction and collaboration among their students. 4. Build study groups so that students will no longer be studying in isolation. 5. Help students to make friends by meeting fellow students in the online environment. 6. Interact with their students by monitoring the online presence of them and supplying them with continuous feedback. 7. Con-

struct their learning materials and environment to target their students. 8. Facilitate the students' interaction with the online material by explaining the goal behind designated tasks. 9. Be careful of students' fears, worries and anxiety because such feelings may have a negative effect on their accessibility and motivation (Nehme, 2010).

The feedback from distance learning is particularly significant in order to maintain motivation and learning continuity. Feedback can be provided in several different forms: written, audio, video form. In the process of providing synchronous feedback, the most adequate form is plain conversation with the student through online communication applications (provided by the official university platform or other applications used by the university). Since giving feedback in this way requires more time on the part of the teacher, it is advisable for the teacher to set aside time for one on one feedback sessions on a specific day of the week. Said sessions will enable students to maintain contact and their relationship with the university and also the feeling that the teachers are at their disposal to give them guidance and support. Feedback can also be given to the entire group to accentuate the progress, or to point out certain challenges that most of the students may be facing. Aside from checking knowledge and learning objectives foreseen by the curriculum, it is advisable for the teacher to allow for students to provide feedback on social and emotional learning, by asking questions like: What do you like in distance learning? What can be improved? What would you recommend? And in that way the teacher can adjust their work to the needs of their students.

The instructor prepares the course material via a number of educational strategies to suit the different learning styles of students. Lecturers can use a number of

strategies to highlight the goals of an assessment: 1. Explain to students why the task is important and interesting to them. It may be useful to link the task to practices that the students may use in their professional life. 2. Define the learning objective of the task. Such objectives will identify the performance standards that a student needs to meet to reach the desired goal. 3. Give advice in relation to the time required to complete the activity. 4. Provide preliminary exercises that the student can practice, thereby building their confidence and boosting their motivation. All these elements should help students to understand online exercise goals which in turn might increase their motivation. Assessments can be formative, i.e. taken throughout the duration of the course or summative, at the end of the course. The most appropriate method of obtaining the student's awareness is through a summative assessment, which is carried out towards the end of the course. The student's performance, or achievement, may be apparent throughout the course in the form of "homework, tests, and class discussions," but in many classroom activities learning "is fugitive, recordable only at great cost and inconvenience". However, e-learning tools can make module assessment more simplified by changing a difficult task into a more achievable one, by enabling an interactive approach to course assessment (Nehme, 2010).

The expectations for success/believing in their capabilities can be encouraged by giving students different opportunities (tasks) where they can be successful and can develop a feeling of personal competence, self-efficacy (I can do it), and build positive expectations about their future success. They need to focus on their personal development/improvement, and not focus on their fellow students. It is also necessary to make connections between the material learned in school and current and future aims and objectives of the student, or in other words, to stress the usefulness of the material that is being taught (this will enable you to … in life) (Wentzel and Wigfield, 1998).

When working together, task content can be understood in more depth and students can develop greater self-confidence. When working in groups, students can experience what it's like to be accepted by others and valued as team members and can share their knowledge more freely. Cooperative learning sees learning as something that takes place on an individual level, but that always requires social exchange. It is of great importance for a student to have his or her actions recognized and for them to have some form of social relevance. Learning always has to do with the self-concept of a student. If learning only happens without any echo from the outside the danger might arise that self-esteem diminishes or that self-efficacy decreases. Self-efficacy means knowing that you have the ability to learn something or to fulfil some kind of task (Bandura 1997). Engaging in an exchange with others converts individual learning processes into social learning processes. By thinking about oneself and by seeing, listening and discussing the opinions and abilities of others, students also learn. Cooperative learning methods engage with both levels: the individual level and the group level.

Research suggests that self-efficacy is highly predictive of performance (Bandura, 1997), that have a powerful impact on grade point average for college students. Additionally, self-efficacy has been linked to willingness to engage in new activities, effort, persistence, and cognitive engagement (Sitzmann and Yeo, 2013). The strong links between self-efficacy and academic success indicate the importance of fostering self-efficacy in the classroom. By systematically exposing students to tasks that are

increasingly challenging, yet within their reach, teachers can help them develop the self-efficacy necessary for success (Bandura, 2001).

LIMITATIONS OF THE PRESENT STUDY

One clears limitation to this study is one shared by many survey-based studies; it used a voluntary sampling method. While this sampling method is popular due to the relative ease of recruiting participants, its shortcomings are well documented. This sample fails to satisfy the criterion of representation: Because the sample used for this study was a convenience sample—not a random one—it is possible that it is not an accurate representation of the population it seeks to study. In other words, students who do not perform well in online classes or who exhibit low levels of academic motivation are a lot less likely to participate in a completely voluntary online study that offers no incentive for participation.

Misrepresentation of the population is a common and legitimate criticism of studies that use convenience samples. Because the sample may not accurately reflect the target population, it may be difficult to apply study results to the general population. We assume that students' responses to the questions might vary as a function of different levels of motivation depending on the course.

Most statistical analysis methods (including the ones used in this study) include random sampling as one of their basic assumptions, and failure to meet this assumption may—under some circumstances— invalidate the conclusions drawn from the analyses. While a misrepresentative sample is never desirable, required participation presents its own challenges with data quality.

Future research regarding the Motivation to Learn Online Questionnaire should focus on instrument enhancement by means of item revision, use of qualitative methods such as student interviews and focus groups, and cross-validation with a new and larger sample of students. Future tests should be conducted on larger, more heterogeneous samples. The sample for the present study was small (N = 184) and limited to students from two universities, as such, any generalization of the findings to other populations is questionable. It is possible that students from other universities perceive their experiences in online classes differently.

APPENDIX 1

SAMPLE STRUCTURE

Course title	University	Number of students
1. Architecture and design	University American College Skopje	6
2. Audit and Accounting	University American College Skopje	2
3. Business communication	University American College Skopje	2
4. Composition	University American College Skopje	26
5. Computer Science and Information Techology	University American College Skopje	2
6. Finance	University American College Skopje	1
7. Foreign languages	University American College Skopje	1
8. Interior Design	University American College Skopje	1
9. Introduction to Marketing	University American College Skopje	1
10. Macedonian Language	University American College Skopje	10
11. Management Psychology	University American College Skopje	4
12. Multiculturalism	University American College Skopje	5
13. Object Oriented Programming	University American College Skopje	1
14. Political Science	University American College Skopje	2
15. Psychology	University American College Skopje	6
16. Psychology of Communication	University American College Skopje	6
17. Statistics	University American College Skopje	2
18. Developmental Psychology	International Balkan University	14
19. Conceptual Art	International Balkan University	1
20. Educational methodology	International Balkan University	1
21. Emotion and Motivation	International Balkan University	7
22. Graphic design	International Balkan University	1
23. Psychological Assessment	International Balkan University	27
24. Psychological Testing	International Balkan University	10
25. Psychology	International Balkan University	8
26. Psychotherapy and Supervision	International Balkan University	3
27. Research Methods for Social Sciences	International Balkan University	26
28. Social Anthropology	International Balkan University	1
29. Social Psychology	International Balkan University	1
30. Special Education	International Balkan University	6

APPENDIX 2

Figure 1
Visual overview of the model used in the factor analyses
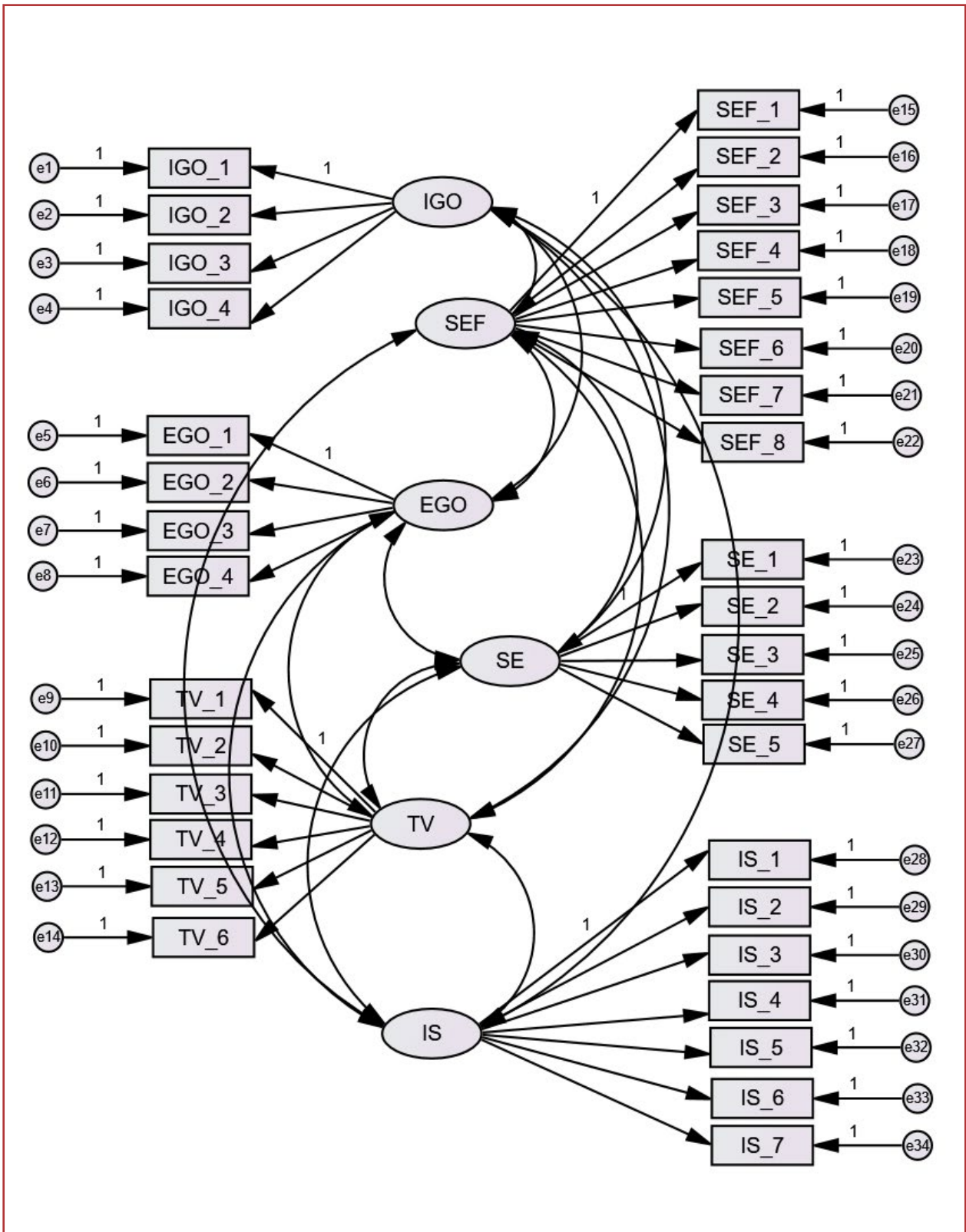
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