



## Motivational Factors Influencing Teachers' Participation in Professional Development Programs

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### ABSTRACT

**Purpose:** The prime objective of the study was to identify the main factors that motivate teachers to participate in activities of professional development.

**Method:** The study employed a survey-based research design and data was collected with the aid of a structured questionnaire adapted from a previous study, containing items on demographics and 32 statements addressing the motivating factors for participation for professional development.

**Findings:** The study used linear regression to achieve the research objective. For each statement, motivational factors, the teachers expressed their personal agreement, on a five-point Likert scale, whether the statement represents a very low or a very high motive for participation in forms of professional development. The results show the positive correlation between extrinsic motivation and formal forms of professional development ( $r=.327$ ,  $p<.01$ ) and nonformal forms of professional development ( $r=.472$ ,  $p<.01$ ). Intrinsic motivation has positive correlations with formal forms of professional development ( $r=.282$ ,  $p<.01$ ) and nonformal forms of professional development ( $r=.438$ ,  $p<.01$ ). The results indicate that there is a positive correlation between extrinsic motivation and both formal and non-formal professional development activities, while intrinsic motivation is positively correlated with both formal and non-formal professional development activities as well. **Implications to Research and Practice:** This research provides valuable insights into the motivational factors that influence teachers' participation in professional development activities, which can inform the development of effective professional development programs. The study is among the pioneer study on the teachers' motivation for attending professional development activities in general and for Kosovo in particular.

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## Introduction

The quality of instruction that students receive is largely dependent on their respective teachers. The level of motivation that a teacher possesses has a significant bearing on the contentment and joy of their students (Zhang, 2022). There is a significant relationship between teachers' happiness in their jobs and their level of work performance, which includes their involvement, commitment, and motivation. Discontentment with one's job as a teacher is strongly linked to both absenteeism in the classroom and a desire to leave the teaching profession altogether (Sadaf et al., 2022). It is a common finding in research that teachers exhibit lower motivation and higher stress levels than other professional groups. This is the case despite the fact that fundamental importance is attributed to the level of motivation that teachers have. When the general significance of having motivated teachers is contrasted with the general lack of motivation among teachers, a striking disparity is revealed: To summarize, despite the fact that teacher motivation is critical to the success of the teaching and learning process, many educators lack it (Inganah, Darmayanti, & Rizki, 2023). In conclusion, it seems that the motivation of teachers is extremely important because not only does it predict the engagement and well-being of teachers, but it also predicts student outcomes such as engagement.

Self-determination theory (Guay, 2022) is a framework for understanding motivation and personality that combine classical empirical methods with an organismic metatheory and places premium on the significance of evolution of inner resources for personality formation and behavioural self-regulation. Human behaviour, according to the self-determination theory, can be attributed to a variety of different types of motivation. The inherent levels of autonomy associated with each type of motivation are thought to be different. Self-determination necessitates an authentic sense of choice as well as the freedom to pursue the path that one envisions for oneself (Gutierrez-Serrano, Romo, & Chagolla, 2022). In a nutshell, self-determination refers to the sensation of having control over one's ability to initiate and direct one's own actions (Chiu, Sun, & Ismailov, 2022).

Self-Determination theory differs from other need-based theories as it posits that human motivation is based on innate psychological needs for a sense of competence, autonomy, and relatedness. The theory distinguishes between several distinct types of motivation, each of which is based on a unique set of reasons or goals that lead to an action. As a result, the self-determination theory postulates that there are two fundamental categories of motivation: intrinsic motivation and extrinsic motivation.

For many years, in-service training has been discussed in the context of teacher professional development. In-service trainings are formally organized activities in which teachers participate passively and scholars share their knowledge and experience on a variety of topics. This viewpoint is supported by academic studies (Domenici, 2022). Teachers are increasingly being viewed as students who can direct and define their own learnings and needs, making professional learning more common than professional development. This shift in perspective represents the transition to the constructivist approach in knowledge-transfer methods in the classroom, and it has also resulted in a similar shift in professional learning models (Stasewitsch, Barthauer, & Kauffeld, 2022).

Recent years have seen an increase in studies focusing on teachers' professional development, which is now seen as a viable option for improving teachers' credentials in

education policy documents. Teachers' knowledge and skill in applying it are crucial to the success of students and the educational system as a whole (Lytras et al., 2022). Teachers need ongoing professional development to keep up with changes in the field, such as those brought about by advances in ICT (Negrín-Medina et al., 2022). They need to be aware about the success of reforms, the education system's continued competitiveness in international areas, and the enhancement of classroom activities. In addition, a teacher's knowledge, abilities, and attitudes are valuable assets (Vigren et al., 2022). As a result, educators have an ongoing obligation to further their education. Teachers' reflections on classroom activities and the role of informal and formal learning settings, as well as barriers to and facilitators of professional development, have begun to receive extensive attention in the relevant literature..

This study focuses on the factors that motivate teachers to continue their professional development and discusses these factors at length. The continuing education of teachers is a requirement in the current climate. The constant demands of parents for teacher selection as part of their awareness of quality teaching, as well as the continuous decline in the number of students enrolled in schools, all contribute to a stronger demand for and a need for the professional development of teachers. Technological advancements, as well as general advancements in society, such as a highly competitive market in the field of teaching; the continuous decline in the number of students enrolled in schools. The recent events that took place in Kosovo, as well as in other places, were one of the factors that pushed us to conduct research on the topic of how to motivate teachers to engage in professional development.

The main factors that motivate humans to act, behave in one way or another, and take steps for affirmation in society are intrinsic and extrinsic factors, as well as administrative obligations for licenses, curriculum changes, and other such things. This is based on the theories of motivation and the authors. These are the main factors that motivate humans. There have been numerous debates on whether one of these two types of factors is more important than the other, or external motivations such as rewards have a negative impact on reducing motivation as well as well-being (Deci & Moller, 2005; Talić et al., 2022).

The goal of this study was to find out how different kinds of motivational factors affect teachers' decisions to take part in continuous professional development. The study also explored the relationship between the type of motivational factors and the demographic background of the teachers, such as age, gender, and experience in teaching. Specifically, the study examined the following questions:

1. What factors motivate teachers for continuous professional development?
2. Is there a relationship between demographic background of teachers and motivating factors for professional development?

### Literature Review

- *Professional development of teachers*

The definition of the concept of professional development is important in addressing the professional development of teachers. Day (1999) defined professional development to include both unintentional and intentional learning opportunities that benefit an individual, a group, or an institution and ultimately improve teaching practices (Day,

1999). Evans (2002), who has written extensively on the topic of professional development of teachers, believes that teachers' professional development should be a priority. According to him, before understanding the steps involved in the development of teachers, one must have a clear understanding of what teacher development entails (Evans, 2002). He added, professional development should consist of "the process by which a teacher's professionalism and/or professionalism may be viewed as being enhanced."

In the relevant research, longstanding education is discussed in terms of how instructors can advance their knowledge and how to define the term "education" Although Knudson (2013) does not at all consider this, teachers still engage in a process that can be described as professional development beginning in college and continuing throughout their careers. However, in some contexts, the idea of professional development is understood as based on a process of inspiring and a range of targets set by administrators to alter the professional development activities that the teacher used in various contexts, leading to ongoing review and change (Jovanova-Mitkovska, 2010). Educators' professional development is defined by Mitchell (2013) as the process through which an individual acquires or enhances the knowledge, skills, and/or attitudes that are essential to better practice in the classroom (Mitchell, 2013).

Since the professional development of teachers is considered as a process of inspiration for work and high achievements with students, it represents an important and motivating factor that should be taken into account when determining the modalities of professional development. Likewise, Van der Klink et al. (2017), adopting the definition of Smith and Desimone (2003), writes "A conceptualization of professional development as a form of growth occurs after a person begins working as a teacher educator [which] is one way to understand this type of growth (Van der Klink et al., 2017), and cannot be considered other than as the development of professional aspects, pedagogy, beliefs or attitudes.

Patterns of professional development, or for teacher change (Guskey, 2002) vary in different countries. In this context, Kennedy (2005) addresses the issue of teacher professional development in relation to the models of authorities and individual models of continuous professional development (Kennedy, 2005). The author does not address the motivating factors that motivate teachers to follow any of the professional development modalities.

In order to examine the factors of professional development of teachers that push an individual to act, it is important to understand the meaning of motivation. According to Han and Yin (2016), the term "teacher motivation" refers to the reasons that arise from an individual's intrinsic values that cause them to choose to teach and to continue teaching, as well as the intensity of teacher motivation, which is indicated by the amount of effort expended on teaching and is affected by a variety of contextual factors (Han & Yin, 2016). This definition stands out for the element mentioned here 'reasons that emanating from individuals' which addresses the internal factors for professional development. At the same time, the authors mention the inner values of the individual that push the individual for action and development, as did Deci and Flaste (1995) with the study 'Why we do what we do'. The authors believed that the individual (in this case the teacher), finds himself within a constant conflict between the internal needs for more autonomy and the external factors which in some way exercise control over him to achieve full self-determination (Deci & Flaste, 1995).

- *Intrinsic vs. extrinsic motivation factors.*

The professional development of teachers is influenced by intrinsic and extrinsic motivation factors. Power and intensity of the influence of motivation factors depend on the individual tendencies of the personality towards the type of motivation. (Maslow, 1970) placed self-actualization at the highest level of motivation in the hierarchy of human needs. The theory of self-determination emphasizes the importance of internal human resources in the development of personality and self-determination of behavior (Deci & Ryan, 1985). Since teaching is a social activity that is constantly changing and evolving, the same is conditioned for teachers: change and continuous professional development. Human motivation is a vague concept, hard to observe and classify, as stated by Hildebrandt and Eom (2011). Similarly, Kwakman (2003) considers the motivating factors, which, according to him, remain obscure (Kwakman, 2003). Participation in forms of professional development driven by internal motivators is viewed as more significant and sustainable. Internal motivating factors take the form of individual needs and demands, such as the need for affirmation, belonging to the group, autonomy, higher achievements, social status, and increased curiosity about the unknown, challenges with change, and the search for professional identity.

Intrinsic motivation as a factor is also treated an altruistic motive and expectation motive (Cameron & Pierce, 1996), according to which they do not appear in all individuals. These two types of motives depend on the social and cultural context of the individual (Hustler, 2003), which are important in outlining the model of teacher professional development. Intrinsic motivation, and the factors that drive it, are an important tool for defining models and practices of teacher professional development. According to Deci and Flaste (1995), intrinsic motivation is associated with richer experience, better conceptual understanding, greater creativity, and improved problem solving in comparison to external controls. The study of motivational factors facilitates the identification of teachers' internal needs for adaptation to professional development modalities. In addition to benefiting teachers, recognizing the internal factors that drive intrinsic motivation helps institutions to adapt to teachers' development policies.

A few studies dispute the validity of the theory of intrinsic motivation, raising doubt over the kind of particular groups of people connected by this theory. Latham and Rotman (2007), for example, stated that it was difficult to grasp the concept of intrinsic motivation since it is understood to be the performance of activities for which there is no apparent external reward. Moreover, it is not an easy task to determine whether or not intrinsic motivation exists based on the basis of behaviour that is maintained in the absence of obvious extrinsic incentives (Latham & Rotman, 2007). Likewise, Kwakman (2003) focused on the topic of the primary factors that play a role in inspiring educators to pursue further professional development. Wan and Lam (2010) suggested aspects of work life to be divided into three categories: personal (including professional attitudes, feasibility assessment, meaningfulness assessment, emotional exhaustion, and loss of personal accomplishment), task (including work pressure, emotional demands, job variety, autonomy, and participation), and work environment (including management support, collegial support, and intentional learning support).

Han and Yin (2016) adopted a traditional research approach on the factors that motivate and demotivate teachers and listed the categorization of motivational factors that

influenced teachers' motivation. Sinclair (2008), one of the most influential authors, divides all of the factors that determine a person's decision to become a teacher into ten different categories. These categories include a person's calling, their students, their altruism, their intellectual simulation, the influence of others, the perceived benefits or accessibility of teaching, the nature of teaching work, a willingness for a career change, the ease of entry into teacher development, and the status of teaching.

However, there is a dearth of research that might show or testify to the predominance of any of the factors mentioned by Kwakman (2003). According to Kwakman (2003), the real factors that influence the participation of teachers in professional development are still unclear (Kwakman, 2003), so researchers have examined the factors that push them to learn new things about the profession. Another issue arose as a result of the fact that the majority of the research was not carried out in direct response to the motivation of teachers. This finding is reinforced by the thought that it is not appropriate to categorize these studies as belonging to the research field of teacher motivation in the traditional sense (Han & Yin, 2016).

Motivational factors have been addressed in different contexts, but the correlation of their impact on teacher participation in forms of professional development has not been specified. While the power of influencing the type of motivating factors in adults remains to be addressed and studied. In the Kosovar context it has not been adequately addressed. Therefore, the use of research results to orient professional development policies and practices based on the needs and motivating factors of teachers for professional development represents an added value for the theory and practices of teacher professional development.

Types of motivators for professional development are closely related to internal and external factors. Motivation is defined as a mental factor that leads us to actions in each of the situations and areas of human life (Ryan & Deci, 2000), while they can be personal and circumstantial factors (Kwakman, 2003) or personal and organizational (Fessler, 1995). According to Alderman (2004) there are four socio-cognitive factors that contribute to intrinsic motivation, such as: attributes / commitment to success, self-efficacy, learning goal orientation (learning goal orientation) and goal settings (goal settings) (Alderman, 2004). The importance of motivation for achieving results has also been confirmed in their research by Abós et al. (2018) when they find that '... teachers who had higher autonomous motivation displayed the most optimal model of outcomes ...' (Abós et al., 2018).

### **Motivational factors for professional development**

In contrast to Kwakman's (2003) study, which is cited by other authors such as Wan and Lam (2010) and Prenger, Poortman, and Handelzalts (2017), who focus primarily on the influence of internal factors on teacher participation in professional development, this research includes a number of external factors. Among the researched factors were the internal need for change and continuous professional development, the growth of the image in society, the feeling of equality - being equal with colleagues, advancement to another position, and a factor of inertia, or the influence of instinct of mass: "since everyone is leaving, I am also leaving", as well as meeting and sharing experiences with others. In the study by Prenger et al. (2017), this is expressed as "If I did not participate, I would feel bad" (Prenger et al., 2017). In addition to professional gain, this factor of inertia and

familiarity with others is viewed as contributing to the preservation of an individual's reputation within his or her social circle. While in the external factors that promote, influence, the participation of teachers in the forms of professional development that were examined were: the provision of the license, or its continuation, the impact on the salary increase, as the provision of the license represents the legal insurance of promotion, which includes salary increases, monitoring technological developments as a necessary part of the development of digital / technological skills, and requests from the teachers' unions.

### Research Methods

- *Research Design*

A quantitative research design was used for this study, which comprised motivational factors for professional development. Using a questionnaire survey design this study examined both internal and external factors and assessed the items on five-point Likert scale, from very low motive to very high motive. Besides items related to the motivational factors, this study also included administrative requests from individuals like the principal and teachers. These requests were related to changes in the curriculum, teachers see it as obligations that must be implemented, so it was difficult in which group or type of motivating factors should be included.

- *Sampling and population*

The study employed the simple random sampling method, and teachers of all public schools in Kosovo were chosen as population of the study. The questionnaire (515) was distributed to teachers at school according to the defined criteria: to be a teacher of primary (1-5) and lower secondary school (6-9) and who have attended at least one professional development training program. About 96% of the teachers who completed the questionnaire met these criteria. Questionnaires were distributed to schools from which the sample was selected. Questionnaires were sent to each teacher in an envelope, which were collected after a week when filled up.

- *Instrument and procedure*

The current study employed the survey based method and Vallerand's AMS-28 questionnaire to collect quantitative data, modified and adapted to the research context. The questionnaire was first piloted on a sample of 30 teachers. It was completely anonymous. In addition to the demographic data of the teachers, the questionnaire also had 32 statements in which the teachers responded on a five-point Likert scale. The statements in the questionnaire included elements of the type of forms of professional development and the type of motivating factors to pursue those forms. The motivating factors included two types: intrinsic motivation (IM) and extrinsic motivation (EM), as well as the forms of professional development in two types: formal (FFPD) and nonformal (NFFPD).

To evaluate the statements regarding the impact of factors that motivate teachers to participate in professional development, teachers responded to a few statements. The underlying question was: To what extent do you agree that the factors presented in the following statements are true for you? To each statement, the teachers had to choose a response from, Strongly disagree (1), Disagree (2), Somewhat agree (3), Much

agree (4), and Strongly agree (5). Each statement contained one of the types of motivators, IM/EM, that influenced teachers to participate in forms of professional development.

- **Data analysis**

The questionnaires were numbered sequentially while the data were entered and processed in SPSS 23 package. Based on the reliability test of the questionnaire, given their compliance in five levels of the Likert scale, the grouped variables had the reliability of ( $\alpha = 0.901$ ).

## Results

The demographic characteristics of the research participants during the data collection are presented in the table below.

A total of 515 teachers participated in this study, 111 (21.6%) of them were male, while 404 (78.4%) were female. Regarding the age of the participants, most belonged to the age group 31-45 years (49.3%), 32.4% belonged to the age group over 46 years and 18.3% belonged to the age group 24-30 years. 42.5% of participants had 7-18 years of work experience and 22.5% had 19-30 years of work experience. Finally, 55.3% taught in the low secondary school grades 6-9, and 44.7% taught in the primary school grades 1-5. The sample was dominated by teachers with 7-18 years of teaching experience, about 43% of the participants, followed by teachers with 19-30 years' experience at 23%, while the lowest degree of involvement was that of teachers with 31-40 years' experience at 7%. The sample was quite representative of all sections and demographics elements.

**Table 1**

*Demographic characteristics of the research participants (N=515)*

Variable	N	%	
Gender	Male	111	21.6
	Female	404	78.4
	Total	515	100
Age	24 to 30 years	94	18.3
	31 to 45 years	254	49.3
	Over 46 years	167	32.4
	Total	515	100
Teaching experiences	1-3 years TE	68	13.2
	4-6 years	73	14.2
	7-18 years	219	42.5
	19-30 years	116	22.5
	31-40 years	39	7.6
Total	515	100	
Level where teaches	Primary, grade 1-5	230	44.7
	Low secondary 6-9	285	55.3
	Total	515	100



Tables 2 and Table 3 present the means and standard deviations regarding intrinsic motivation and extrinsic motivation. The mean of intrinsic motivation of eighteen statements is 4.30, which is on the positive side of the Likert scale. The mean of extrinsic motivation of fourteen statements is 3.78. In some questions, standard deviations have values greater than 1, but most questions have values that do not cause concern.

**Table 2**

*Descriptive statistics of the Intrinsic Motivation Questionnaire*

	<b>Item</b>	<b>N</b>	<b>M</b>	<b>SD</b>
IM 1:	Because teaching is a passion for me, I love it so much, so I want to perfect it	5024	4.740	0.539
IM 2:	Because the more knowledge and skills I gain I can give more to society	5024	4.670	0.573
IM 3:	Because I enjoy being able to help others with teaching	4984	4.620	0.552
IM 4:	Because I want to share my knowledge with my students and colleagues	5024	4.610	0.581
IM 5:	Because I want to explore new and interesting things for better success with students	5004	4.580	0.629
IM 6:	Because I feel fulfilled and autonomous when I master my profession as well as possible	5024	4.520	0.664
IM 7:	Because I feel very good when others appreciate my work	5014	4.470	0.665
IM 8:	I attend training to enhance my professional skills	5054	4.460	0.781
IM 9:	I feel pleasure when I attend training and learn something new about my job	5084	4.330	0.836
IM 10:	Because I consider myself born to teach, so I want to perfect it every day and more	5034	4.310	0.844
IM 11:	Students' success motivates me to continually advance my professional competence	5014	4.300	0.823
IM 12:	Because by developing myself professionally I can also help my colleagues	5014	4.280	0.772
IM 13:	To meet colleagues and exchange new experiences and ideas with them: give and take	5084	4.190	0.823
IM 14:	Because I value my needs and shortcomings, I want to improve them	5004	4.170	0.805
IM 15:	Because I want to perform teaching tasks without anyone's help, to be autonomous	5013	3.91	1.01
IM 16:	To prove that my participation fulfils my goals	5023	3.880	0.894
IM 17:	Because during professional development I feel how much I need others	5023	3.730	0.956
IM 18:	Because in workshops and training I participate to create new professional and collegial relatedness	5013	3.660	0.941
No of Valid Cases (listwise)		5024	4.30	

In both questionnaires, the number of respondents varied, from 498 to 508 in the intrinsic motivations, and from 497 to 502 respondents in the external motivations, which refers to the number of respondents who filled up the questionnaire without any omissions and were valid submissions.

**Table 3***Descriptive statistics of the Extrinsic Motivation Questionnaire*

	N	M	SD
EM 1: Because developments in teaching technology make professional development necessary	5014	300.763	
EM 2: Because the school tradition of teaching encourages me to constantly develop	5004	290.827	
EM 3: Because my success is enhancing my image in school and community, so I want to grow	5004	120.892	
EM 4: Because I want my success and contribution to be rewarded	5004	08 1.02	
EM 5: Because students are more and more prepared, so I need to be one step ahead of them	4973	88 1.06	
EM 6: Because I choose for myself which forms of professional development, I want to participate in	5053	881.011	
EM 7: Because curriculum changes are an important factor for professional development	4993	840.949	
EM 8: Public praise/appreciation from leaders motivates me for professional development	5033	84 1.08	
EM 9: As competition for teachers grows, I want to be prepared for new challenges	5043	80 1.03	
EM 10: Because remarks and critics motivate me for constant training and change	5033	790.969	
EM 11: Students' failure has the effect of constantly improving my professional competence	5003	72 1.14	
EM 12: Because I need to fill out re-licensing credits	5023	51 1.13	
EM 13: Because I expect salary increases as a result of continuous professional development	5013	16 1.26	
EM 14: Because it has become a kind of 'fashion' to participate in training	5022	65 1.26	
N of Valid Cases (listwise)	5013	78	

### Reliability analysis results

The concept of reliability is necessary for each measurement scale because reliability expresses the consistency between the questions that are included in a test or survey and to what extent the measurement reflects the question (Kalayci, 2014). Reliability Analysis is a method developed for evaluating the characteristics and reliability of tests, surveys or tools used during measurement. With the Reliability Analysis procedure, the coefficients are calculated which determine the reliability of the total results (points) of the scales such as Likert, Type Q and like, where information is obtained about the relationship between the questions of the scale (Kalayci, 2014).

**Table 4***Cronbach Alpha values related to research questionnaires*

Type of motivation	Number of statements	Value Cronbach Alpha
Intrinsic motivation	18	0.814
Extrinsic motivation	14	0.835
Intrinsic and extrinsic motivation	32	0.901

Table 4 summarizes the results of the reliability analysis regarding the questionnaires used in the research. The Alpha reliability coefficient for the extrinsic and intrinsic motivation questionnaire is 0.814 and 0.835, respectively. These values show that the questionnaire had high reliability. Likewise, the overall reliability of the questionnaire including all statements (32 statements) is seen high, i.e., 0.901. The value of the KMO test was also found to be below the threshold, at 0.869, which indicated that the data set was very adequate for performing factorial analysis. This can also be observed from the Bartlett test, which was significant  $\text{Sig}=0.000 < 0.05$  and which showed that there were correlations between the statements.

**Table 5**

*Total explained variance in factor analysis*

Components	Initial Eigen value			Rounded Sums of Charges Squared		
	Total	% Variance	% Cumulative	Total	% Variance	% Cumulative
1	6.575	23.482	23.482	3.317	11.847	11.847
2	2.130	7.608	31.090	2.376	8.485	20.332
3	1.927	6.883	37.973	2.147	7.669	28.001
4	1.552	5.542	43.515	2.127	7.597	35.598
5	1.257	4.490	48.005	1.998	7.136	42.734
6	1.075	3.840	51.845	1.812	6.471	49.205
7	1.032	3.687	55.532	1.772	6.327	55.532
8	0.964	3.441	58.974			
9	0.904	3.228	62.201			
10	0.857	3.061	65.262			
11	0.743	2.653	67.915			
12	0.742	2.650	70.566			
13	0.712	2.544	73.109			
14	0.680	2.429	75.538			
15	0.661	2.359	77.897			
16	0.638	2.278	80.176			
17	0.616	2.200	82.376			
18	0.591	2.110	84.485			
19	0.550	1.963	86.448			
20	0.508	1.814	88.262			
21	0.494	1.763	90.025			
22	0.460	1.643	91.668			
23	0.452	1.614	93.282			
24	0.423	1.511	94.793			
25	0.402	1.435	96.229			
26	0.372	1.329	97.558			
27	0.351	1.255	98.813			
28	0.332	1.187	100.000			

Extraction Method: Principal Components Analysis.

Table 5 presents the amount of total variance explained. This amount was determined using the principal component analysis method for factor extraction and considering the Eigen value for factors whose value is greater than 1.0. Component analysis considers total variance and extracts factors that contain small amounts of unique variance and, in some cases, error variance (Hair et al., 2019).

By means of 18 statements, seven factors were formed in total. This means that fourteen statements were removed from the factor analysis. The reason for this is that some of the statements had low weights (below 0.40), two statements had negative weights, while other statements were classified in different factors, thus forming a completely different structure from what is predicted by the literature. In this way, the factorial analysis was repeated several times by adding and removing back these statements, until the current result was reached, which best corresponds to the structure of the variables.

The statements that have been removed from the factor analysis are: IM1, IM 2, IM 6, IM 12, IM 14, IM 16, IM 17, IM 18, EM1, EM 2, EM 4, EM 10, and EM 13. The first factor describes 11.847% of the total variance; the second factor describes 8.485% of the total variance, and so on. Together, the seven factors explain 55.532% of the total variance. In the social sciences, where information is often less precise, it is not unusual to consider a solution that accounts for 60 percent of the total variance as satisfactory, and in some cases even less (Hair et al., 2019). Considering the large number of statements included in our analysis, we can conclude that the total explained variance of 55% is an acceptable value.

- **Analysing the correlation between variables**

Prior to testing the research questions, correlation analysis was conducted to see the linear relationships between the key research variables, along with the descriptive characteristics of the research participants. Initially, the average of the statements for each factor was found separately, then the factors of internal motivation and the factors of informal forms of professional development were summarized in single factors, since there is no need to analyse them separately.

Table 6 summarizes the results of the correlation analysis. There is a stable and positive correlation between extrinsic motivation and formal forms of professional development ( $r=0.327$ ,  $p<0.01$ ) and informal forms of professional development ( $r=0.472$ ,  $p<0.01$ ). Intrinsic motivation does not have any significant correlation with any of the demographic variables. Intrinsic motivation has significant and positive correlations with formal forms of professional development ( $r=0.282$ ,  $p<0.01$ ) and nonformal forms of professional development ( $r=0.438$ ,  $p<0.01$ ). Intrinsic motivation also has no correlations with the demographic characteristics of teachers/sample.

**Table 6**

*Relationships between variables*

	EM	IM	FFPD	NFFPD	Gender	Age	Teach. exp.
EM	1						
IM		1					
FFPD	0.327**	0.282**	1				
NFFPD	0.472**	0.438**	0.497**	1			
Gender	0.018	-0.042	-0.020	0.030	1		
Age	-0.064	.026	-.071	0.089*	-0.130**	1	
Teach. Exp.	-0.047	0.022	-0.097*	0.094*	-0.109*	0.766**	1

EM-external motivation; IM-internal motivation; FFPD-formal forms of professional development; NFFPD -Nonformal forms of professional development

\*\* The correlation is significant at the 0.01 level (2-tailed). \* The correlation is significant at the 0.05 level (2-tailed).

In order to test the influence of extrinsic and intrinsic motivation in formal and nonformal forms of professional development, linear regression analysis was applied.

- **Testing the impact of extrinsic and intrinsic motivation on formal and nonformal forms of professional development**

**Table 7**

*Regression analysis regarding the testing of the impact of extrinsic motivation on formal forms of professional development*

	$\beta$	t	Sig.	R	R <sup>2</sup>	F	Sig. (model)
Constant	3.096	17.307	.000	0.327	0.107	60.864	.000
EM	0.328	7.802	.000				

Dependent variable: FFDP

Table 7 presents the results of the regression analysis in relation to testing the impact of external motivation on formal forms of professional development. The summary of the model (R<sup>2</sup>) shows that external motivation explains 10.7% of the variation in formal forms of professional development and this regression model is significant (F=60.864, p<0.01). The  $\beta$  coefficient shows that external motivation has a positive impact ( $\beta = 0.328$ , p<.01) on formal forms of professional development.

**Table 8**

*The results of the regression analysis regarding the testing of the impact of extrinsic motivation on informal forms of professional development*

	$\beta$	t	Sig.	R	R <sup>2</sup>	F	Sig. (model)
Constant	2.426	15.830	.000	0.472	0.223	145.672	.000
EM	0.434	12.069	.000				

Dependent variable: NFFP

Table 8 presents the results of the regression analysis in relation to testing the impact of external motivation on informal forms of professional development. Model summary (R<sup>2</sup>) shows that extrinsic motivation explains 22.3% of the variation in non-formal forms of professional development and this regression model is significant (F=145.672, p<0.01). The  $\beta$  coefficient shows that extrinsic motivation has a positive impact ( $\beta=0.434$ , p<0.01) on nonformal forms of professional development.

**Table 9**

*The results of the regression analysis regarding the testing of the impact of intrinsic motivation on formal forms of professional development*

	$\beta$	t	Sig.	R	R <sup>2</sup>	F	Sig. (model)
Constant	3.274	17.869	.000	0.282	0.080	44.142	.000
IM	0.309	6.644	.000				

Dependent variable: FFDP

Table 9 presents the results of the regression analysis in relation to testing the impact of intrinsic motivation on formal forms of professional development. The summary of the

model (R2) shows that internal motivation explains 8% of the variation in formal forms of professional development and although this value is low, the general regression model is significant ( $F=44.142$ ,  $p<0.01$ ). The  $\beta$  coefficient shows that intrinsic motivation has a positive impact ( $\beta=0.309$ ,  $p<0.01$ ) on formal forms of professional development. In other words, when intrinsic motivation increases by one-unit, formal forms of professional development increase by 0.309 units.

**Table 10**

*The results of the regression analysis regarding the testing of the impact of intrinsic motivation on nonformal forms of professional development*

	$\beta$	t	Sig.	R	R <sup>2</sup>	F	Sig. (model)
Constant	2.538	6.085	0.000	0.438	0.192	120.676	0.000
IM	0.440	10.985	0.000				

Dependent variable: NFFPD

Table 10 summarizes the results of the regression analysis in relation to testing the impact of intrinsic motivation on nonformal forms of professional development. Model summary (R2) shows that intrinsic motivation explains 19.2% of the variation in nonformal forms of professional development and that the overall regression model is significant ( $F=120.676$ ,  $p<0.01$ ). The  $\beta$  coefficient shows that intrinsic motivation has a positive impact ( $\beta=0.440$ ,  $p<0.01$ ) on nonformal forms of professional development. In other words, when intrinsic motivation increases by one-unit, nonformal forms of professional development increase by 0.440 units. In addition to the specific influences of the forms of motivation on the forms of professional development, we have also tested the total influences of the forms of motivation on the specific forms of professional development. These results are presented below.

**Table 11**

*Regression analysis regarding testing the impact of motivation (extrinsic and intrinsic) on formal forms of professional development*

	$\beta$	t	Sig.	R	R <sup>2</sup>	F	Sig. (model)
Constant	2.811	13.869	0.000	0.349	0.122	35.114	0.000
IM	0.162	2.919	0.000				
EM	0.246	4.851	0.000				

Dependent variable: FFPD

Table 11 summarizes the results of the regression analysis in relation to testing the impact of motivation (extrinsic and intrinsic) on formal forms of professional development. Model summary (R2) shows that intrinsic motivation and extrinsic motivation, together, explain 12.2% of the variation in formal forms of professional development. The regression model is significant ( $F=35.114$ ,  $p<0.01$ ). If we examine the Beta coefficients, we see that the coefficient  $\beta$  of intrinsic motivation shows that intrinsic motivation has a positive influence of  $\beta=0.162$ ,  $p<0.01$  in formal forms of professional development, while extrinsic motivation has a higher influence  $\beta=0.246$ ,  $p<0.01$  in formal forms of professional development than intrinsic motivation. Based on these data, we can conclude that both types of motivation have a common significant impact on teachers' professional development.

**Table 12**

*Regression analysis regarding the testing of the influence of motivation (extrinsic and intrinsic) in informal forms of professional development*

	$\beta$	t	Sig.	R	R <sup>2</sup>	F	Sig. (model)
Constant	1.974	11.614	0.000	0.517	0.267	92.237	0.000
IM	0.252	5.421	0.000				
EM	0.308	7.248	0.000				

Dependent variable: NFFPD

Table 12 summarizes the results of the regression analysis in relation to testing the impact of motivation (extrinsic and intrinsic) on nonformal forms of professional development. Model summary (R<sup>2</sup>) shows that intrinsic motivation and extrinsic motivation, together, explain 26.7% of the variation in informal forms of professional development. The regression model is significant (F=92.237, p<0.01). The regression coefficients show that intrinsic motivation has an impact of  $\beta=0.252$ , p<0.01 on nonformal forms of professional development, while extrinsic motivation, again, has a higher impact  $\beta=0.308$ , p<0.01 in nonformal forms of professional development than intrinsic motivation. As can be understood from all the above analyses, extrinsic motivation consistently has a higher impact, both in formal and nonformal forms of teachers' professional development.

**Table 13**

*The results of the paired-samples t-test regarding the differences between types of motivation and forms of professional development*

		M	SD	t	Sig.
Pair 1	EM	4.2256	0.53950	14.545	0.000
	IM	3.9134	0.49333		
Pair 2	FFPD	4.4822	0.54109	9.631	0.000
	NFFPD	4.2604	0.49672		
Pair 3	EM	4.2249	0.53966	-9.228	0.000
	FFPD	4.4808	0.54160		
Pair 4	IM	3.9110	0.49592	-20.704	0.000
	FFPD	4.4814	0.54206		
Pair 5	EM	4.2244	0.54005	-1.508	0.132
	NFFPD	4.2600	0.49715		
Pair 6	IM	3.9098	0.49561	-14.939	0.000
	NFFPD	4.2580	0.49758		

**Note:** EM-external motivation; IM-internal motivation; FFPD-formal forms of professional development; NFFPD -Non-formal forms of professional development

- **Testing the differences of types of motivation and forms of professional development**

Table 13 presents the results of the paired samples t-test regarding the differences between types of motivation and forms of professional development. At the beginning, we compared the averages of extrinsic motivation and intrinsic motivation. The average of extrinsic motivation is 4.22, while the average of intrinsic motivation is 3.91. The mean

difference is 0.31. The value  $t = 14.545$ ,  $p < .01$  shows that the difference between these two averages is significant and that extrinsic motivation has a higher average than intrinsic motivation.

In the second pair, formal and nonformal forms of professional development were compared. The average of the FFPD is 4.48, while the average of the NFFPD is 4.26. The mean difference is 0.22. The value  $t = 9.631$ ,  $p < .01$  shows that this difference between these two averages is significant and that the average of FFPD is higher than that of NFFPD. In the third pair, the average of external motivation was compared with the average of formal forms of professional development. The average of EM is 4.22, while that of FFPD is 4.48. The average difference is  $-0.26$ . The value  $t = -9.228$ ,  $p < .01$  shows that this difference between these two averages is significant and the average of FFPD is higher than that of EM.

In the fourth pair, we compared the average of intrinsic motivation with the average of formal forms of professional development. The average IM is 3.91, while the average FFPD is 4.48. The average difference is  $-0.57$ . The value  $t = -20.704$ ,  $p < .00$  shows that this difference in average is significant. The average of FFPD is higher than that of IM. In the fifth pair, the mean of extrinsic motivation was compared with nonformal forms of professional development. The average of EM is 4.22, while the average of NFFPD is 4.26. The average difference is  $-0.04$ . The value  $t = -1.508$ ,  $p > .05$  shows that this difference is not significant.

Finally, the sixth pair compares the means of intrinsic motivation and nonformal forms of professional development. The IM average is 3.90, while the NFFPD average is 4.25. The average difference is  $-0.35$ . This difference shows that the average of NFFPD is higher than that of IM and this difference is significant ( $t = -14.939$ ,  $p < .01$ ).

- *Testing differences in types of motivation according to demographic characteristics*

In the following, the difference in the types of motivation according to gender was tested using the t-test of independent samples.

**Table 14**

*Independent t-test results regarding differences in types of motivation by gender*

	Gender	N	M	SD	t	Sig.
EM	Male	110	4.2068	0.55915	-0.397	0.692
	Female	402	4.2299	0.53480		
IM	Male	109	3.9507	0.55707	0.941	0.347
	Female	402	3.9002	0.47819		

Table 14 summarizes the results of the independent t-test regarding differences in types of motivation by gender. The average of men regarding external motivation is 4.20, while that of female is 4.22. As can be seen visually, there is no significant difference between male and female teachers in terms of external motivation ( $t = -0.397$ ,  $p > .05$ ). Similarly, the male mean on intrinsic motivation is 3.95, while the female mean is 3.90. As can be seen, the difference is not significant ( $t = 0.941$ ,  $p > .05$ ).



**Table 15***Results of ANOVA analysis regarding differences in types of motivation according to age groups*

	Age	N	M	SD	F	Sig.
EM	24 to 30 years old	92	4.3053	0.49453	1.317	0.269
	31 to 45 years old	254	4.2154	0.54764		
	Over 46 years old	166	4.1950	0.55004		
IM	24 to 30 years old	91	3.8611	0.45188	0.625	0.536
	31 to 45 years old	253	3.9289	0.48348		
	Over 46 years old	167	3.9111	0.53683		

Table 15 presents the results of the ANOVA analysis regarding the differences in the types of motivation according to age groups. Means and standard deviations for age groups are given. The value  $F=1.317$  and  $p=0.269>0.05$  show that there is no significant difference between the age groups of teachers in terms of external motivation for professional development. The same applies to intrinsic motivation. The value  $F=0.625$ ,  $p=0.536>0.05$  shows that there is no significant difference between the age groups of teachers in terms of internal motivation.

**Table 16***Results of ANOVA analysis regarding differences in types of motivation according to teaching experience*

		N	M	SD	F	Sig.
EM	1-3 years	67	4.2273	0.55300	2.667	0.032
	4-6 years	72	4.2950	0.48086		
	7-18 years	219	4.2573	0.54071		
	19-30 years	116	4.0885	0.57117		
	31-40 years	38	4.3177	0.46202		
IM	1-3 years	66	3.8232	0.48655	0.816	0.515
	4-6 years	72	3.9533	0.43556		
	7-18 years	219	3.9344	0.51565		
	19-30 years	115	3.8909	0.50401		
	31-40 years	39	3.9095	0.48244		

Table 16 presents the results of the ANOVA analysis regarding the differences in the types of motivation according to teaching experiences. The value  $F=2.667$ ,  $p<0.05$  shows that there are significant differences in extrinsic motivation according to teaching experiences. These differences were examined using the Tukey multiple comparisons table in Table 17. According to these results, there is a significant difference between teachers in the teaching experiences 7-18 years and 19-30 years. The mean difference is 0.16873. According to this difference, teachers in the career stage 7-18 years have a higher extrinsic motivation than teachers in the career stage 19-30 years. However, the differences between teachers in other career stages, or teaching experiences, are not significant. Regarding the differences in intrinsic motivation, the value  $F=0.816$ ,  $p>0.05$  shows that there is no significant difference in intrinsic motivation according to the phases of the teachers' experience.

**Table 17**

*Results of multiple comparisons regarding significant differences in extrinsic motivation according to teaching experience*

EM	Teaching experience	Teaching experience	Average difference	SE.	Sig.
	7-18 years	19-30 years	0.16873	0.06157	0.050

According to [Scribner \(1999\)](#) this is considered as an external factor, or the influence of colleagues for participation in professional development ([Scribner, 1999](#)). In contrast to Scribner results, where extrinsic factors, such as license requirements and salary, are primary to teacher participation in forms of professional development ([Scribner, 1999](#)), in the case of our research license and salary, such extrinsic factors, ( $M=3.5$ ,  $SD =1.1$ ) are not primary to teachers' participation in professional development activities.

### Discussion

The results of the regression model indicate that teachers' engagement in formal forms of professional development is significantly affected by both intrinsic and extrinsic motivational factors. Extrinsic motivation was found to have a slightly larger impact than intrinsic motivation on engagement in formal forms of professional development, but both were significant. This result is in line with previous studies showing that financial incentives and public acknowledgement are two external motivators that can increase the number of people who take part in formal or required professional development programs ([Gorozidis & Papaioannou, 2014](#)). However, it is also worth noting that teachers' own interests in the subject matter or a desire for personal growth can be just as important in getting them to participate in professional development opportunities.

Teachers' intrinsic and extrinsic motivation should be considered when designing professional development programs, as indicated by the significance of the regression model ([Shamir-Inbal & Blau, 2022](#)). Policymakers and school heads can encourage more teachers to take part in professional development by offering a variety of options that appeal to both types of motivation.

The findings from the pairwise comparisons shed more light on the connection between the various sources of teacher motivation and the various methods of professional growth ([Vermote et al., 2020](#)). Based on the results of the first comparison, it appears that teachers are influenced less by intrinsic factors like interest and satisfaction and more by extrinsic ones like salary and career advancement. According to the results of the second comparison, educators appear to place more value on formally structured and organized learning opportunities than on self-directed or informal ones ([Curran et al., 2019](#)).

The third and fourth comparisons shed light on how intrinsic and extrinsic motivation relate to more traditional routes of professional growth. Formal forms of professional development are valued by educators more than either external or intrinsic motivation, and the difference between the means is statistically significant. In light of these findings, it seems that teachers, regardless of their level of motivation, may be more likely to participate in formal professional development activities. It is clear from the fifth set of comparisons that there is no discernible distinction between extrinsic motivation and informal means of professional development. The findings may indicate that teachers'

intrinsic motivation is not a significant predictor of their participation in nonformal forms of professional development. At last, the sixth comparison shows that the average of nonformal forms of professional development is higher than intrinsic motivation. This finding suggests that teachers may be influenced less by intrinsic factors like interest or satisfaction and more by opportunities for self-directed or informal learning.

Overall, these comparisons between pairs of variables show how intricate the interplay is between teachers' motivation and various methods of professional growth. The findings indicate that teachers' motivation to participate in professional development is influenced by both intrinsic and extrinsic factors, though the relative importance of these factors may vary according to the type of professional development being undertaken. Additionally, the findings suggest that teachers may place more value on formal and organized learning opportunities than on self-directed and informal learning, but that both types of learning environments can contribute significantly to a teacher's professional growth.

### Conclusion

The present research confirms that the results of Self-determination theory can serve to deepen the understanding of the relationship between the type of motivational factors and the type of professional development forms for the improvement of the policies and practices of the professional development of teachers. Many studies have shown the role of motivational factors for the professional development of in-service teachers. The studies also show the correlation of the type of motivational factors, especially internal ones, with the general national culture of teachers.

According to [Goroizidis and Papaioannou \(2014\)](#) teachers' engagement in professional development programs in many countries is not mandatory, while for the teachers of Kosovo this is mandatory for obtaining or retrieving the license. According to the study of [Han and Yin \(2016\)](#), Slovenia, e.g., External motivation, such as salary, is much higher, compared to Chinese teachers where internal motivation is rated as very important in improving teaching. Thus, the socio-cultural context of the perception of motivating factors, internal or external, is an important indicator. This was also confirmed with the Kosovar teachers who were the case of the research.

This element, the relationship between motivating factors and teachers' self-determination for the type of forms of professional development should be taken into account and taken into consideration. This will help the professional development of teachers based on their needs and interest, but also increase the efficiency of teaching.

### Limitations, Recommendations And Implications

While the present research provides valuable insights into the motivational factors that influence teachers' participation in professional development activities, there are several limitations that should be taken into account. Firstly, the study was conducted using a structured questionnaire, which may limit the depth of the data collected, as participants were only able to provide answers to predetermined questions. Additionally, the use of self-reported data may have introduced bias, as participants may not have been entirely truthful in their responses. Secondly, the study was conducted in a specific context (Kosovo) and with a specific sample (in-service teachers), which limits the generalizability of the findings to other contexts and populations. Thirdly, the study focused only on the

relationship between motivational factors and the type of professional development forms, without taking into account other factors that may influence teachers' participation in such activities, such as the availability of resources or the support of school administrators. Finally, the study did not examine the long-term effects of professional development activities on teachers' practice and student outcomes, which would be important to determine the overall effectiveness of such activities.

Based on the findings of this study, several recommendations and implications can be drawn to improve the effectiveness of professional development programs for teachers. Firstly, it is important for policymakers and educational leaders to take into account the different motivational factors that influence teachers' participation in professional development activities. This can be done by providing a range of professional development opportunities that cater to both intrinsic and extrinsic motivational factors. Secondly, the study highlights the importance of considering the socio-cultural context of teachers when designing professional development programs. Understanding the cultural values and beliefs that influence teachers' motivation can help to tailor professional development opportunities to meet their specific needs and interests.

Thirdly, professional development programs should be designed to promote teachers' self-determination and autonomy in choosing the type of activities they participate in. This can be achieved by providing opportunities for teachers to collaborate with colleagues, share their experiences, and reflect on their own learning needs. Finally, it is important to evaluate the effectiveness of professional development programs over the long term, in order to determine their impact on teachers' practice and student outcomes. This can be done through the use of rigorous evaluation methods, such as randomized controlled trials or quasi-experimental designs.

Overall, by taking into account the motivational factors that influence teachers' participation in professional development activities and tailoring programs to meet their specific needs and interests, policymakers and educational leaders can help to improve the effectiveness of professional development and ultimately enhance the quality of education for students.

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