CHARLES UNIVERSITY

FACULTY OF SOCIAL SCIENCES

Institute of Sociological Studies

Department of Public and Social Policy

Master's Thesis

2024 **Vana Ćendo**

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Work Motivation of High School Teachers in Split, Croatia: Self-Determination Theory Perspective

Master's Thesis

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Study Program: Master's Program in Public and Social Policy Studies

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Year of defense: 2024

Declaration

1. I hereby declare that I have compiled this thesis using the listed literature and resources only.
2. I hereby declare that my thesis has not been used to gain any other academic title.
3. I fully agree to my work being used for study and scientific purposes.

In Prague, on July 16, 2024 Vana Ćendo

Reference

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Title

Work Motivation of High School Teachers in Split, Croatia: Self-Determination Theory Perspective

Název práce

Pracovní motivace středoškolských učitelů ve Splitu, Chorvatsko: Perspektiva Sebedeterminační teorie

Abstract

With many countries, including Croatia, experiencing teacher shortages, a lack of public respect for the teaching profession, and many obstacles within the education system, it is essential to focus on research of motivation of main actors within the education system – teachers.

The presented thesis dives into the topic of work motivation of teachers from the perspective of the Self-determination theory. It explores the motivation states among high school teachers and satisfaction of the three basic psychological needs outlined in the Self-determination theory – autonomy, competence, and relatedness.

This thesis is structured around the Self-determination theory, which serves as the main theoretical framework. It provides a comprehensive understanding of the Croatian educational system, the primary motivation components and motivation theories, and the essential components of the Self-determination theory.

The empirical research aims to analyze teachers' work motivation in public high schools in Split, the second-largest city in Croatia. It also investigates the satisfaction and frustration of their basic psychological needs, providing a comprehensive overview of the current state of work motivation among teachers in Croatia.

Keywords

Motivation, Work Motivation, Education System, Croatia, Teachers, Self-determination Theory, High School Education, Basic psychological needs

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A character from my favorite movie when I was nine said: “Life is the climb, but the view is great.”

I agree.

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List of Abbreviations

GDP – Gross Domestic Product

ECEC – Early Education and Care

TALIS - Teaching and Learning International Survey

SDT – Self-determination theory

CET – Cognitive Evaluation Theory

OIT – Organismic Integration Theory

COT – Causality Orientations Theory

BPNT – Basic Psychological Needs Theory

GCT – Goal Contents Theory

AMO – Amotivation

ER – External Regulation

INTRO – Introjected Regulation

IDEN – Identified Motivation

INTEG – Integrated Motivation

MWMS – Multidimensional Work Motivation Scale

BPNSFS – Basic Psychological Need Satisfaction and Frustration Scale

Introduction

One of the biggest challenges in today's work environment is acquiring a quality workforce and keeping employees motivated. Therefore, employees' motivation and job satisfaction are the focal points of every organization's successful functioning.

Many factors influence people's motivation in the workplace, some of them being working conditions, workplace relations, communication and management strategies, information level, reward systems, and decision-making chances (Vallerant et al., 1993, as cited in Serhan et al., 2018). These factors significantly influence employees' behavior in the workplace, and consequently their psychological state.

Motivation is a process that results from personal characteristics, core job dimensions, labor market conditions, and work environment contributing to employees' motivation and their productivity, progress, and organizational development (Roussel, 2001, as cited in Serhan et al., 2018).

A widespread and popular motivation classification is the division between intrinsic and extrinsic motivation. Intrinsic motivation meaning that a person is doing an activity because they find it fulfilling, interesting and exciting and obtain satisfaction from it (Gagné & Deci, 2005).

In contrast, extrinsic motivation requires tangible or verbal rewards for completing the activity or task, meaning that satisfaction does not derive from an activity but rather from the following reward (Gagné & Deci, 2005).

Research on teacher motivation has been developing since the late 1990s and has been showing an increase in research and literature ever since (Han & Yin, 2016).

One of the possible needs for research can be connected to teacher shortages recorded in many Western countries (Weiss, 1999, as cited in Han & Yin, 2016). The significance of research in teacher motivation is essential because it is a factor that is intertwined with many others, such as student motivation, teacher practice, well-being, and psychological fulfillment of teachers and educational staff and the education sector (Han & Yin, 2016).

Even though literature suggests many definitions of motivation, Williams and Burden (1997, as cited in Han & Yin, 2016) identified two key dimensions: initiating motivation - reasons to do an action, and sustaining motivation, which refers to efforts to persist in the action. Therefore, when we talk about teachers' motivation, especially in the efforts to retain teachers in their teaching positions, it is essential to be aware of these dimensions.

Following these two dimensions, Sinclair (2008, as cited in Han & Yin, 2016, p. 37) defined teacher motivation as "what attracts individuals to teaching, how long they remain in their initial teacher education courses and subsequently the teaching profession, the extent to which they engage with their courses and the teaching profession."

Early research on teacher motivation mainly focused on reasons and factors contributing to choosing the teaching profession; however, research has shifted in the past decade to in-service teachers' motivation and motivating or demotivating teachers (Han & Yin, 2016).

Salifu and Agbenyega (2013, as cited in Shikalepo, 2020) emphasize that teacher motivation refers to working conditions that encourage teachers' desirable behaviors, consequently resulting in a high-quality professional practice.

Teachers are crucial in implementing the educational process and should be the education sector's priority. A lack of teacher motivation leads to teacher shortages and declined school performance in general (Urwick et al., 2005, as cited in Shikalepo, 2020).

Teachers' demotivation is very common and can be caused by many stressors in their work environment. Some are time constraints, lack of autonomy, and conflicts with parents and authorities (Boljat, 2020). Based on these findings, new practices should be implemented to create a more motivating work environment for teachers and consequently achieve their and their students' satisfaction.

Self-determination theory was developed by Ryan and Deci and focused on the continuum ranging from the state of amotivation on one side to the state of intrinsic motivation on the other. It is a theory that tries to describe motivation by keeping in mind both, the individual differences between people and the outside environment and its influence on one's motivation (Deci & Ryan, 2002).

Additionally, this theory focuses significantly on the three primary psychological needs: competence, relatedness and autonomy. The framework explains motivation or lack of it through satisfaction and frustration regarding these three needs (Deci & Ryan, 2002). The

framework has been used in many contexts, from business to behavioral and organizational settings. Its use in the field of education has been prominent, and it is used both in explaining teachers' and students' motivation. Even though teachers are influenced by many factors in their environment, such as external motivators like salaries and respect for their profession, research indicated that individuals who are more intrinsically motivated or self-determined within the teaching environment are associated with many positive outcomes (Ryan & Deci, 2009, as cited in Perlman, 2018).

In Croatia's case, few research resources are allocated to the public sector and the education field, especially to the work motivation of public servants and teachers. Much international research has shown the importance and impact of work motivation on the results of the organization's work and achievements, especially within the school context where the influence of teachers can be measured in the quality of the given education in general, students' motivation and their behavioral and academic outcomes. Quality working conditions should be provided for employees who play a crucial role in the country's society and reflect employees' needs.

The research aims to recognize the state of motivation of high-school teachers in Croatia, specifically teachers in the public high school teachers in Split, the second-largest city in Croatia, using the framework of Self-determination Theory.

Choice of the Topic

I have always been interested in the topic of motivation, what it is shaped by, how it influences our choices and behavior, and whether intrinsic motivation can genuinely be preserved with the influence of all the outside factors we encounter daily.

Growing up and throughout my education, I had come across many teachers who shaped my attitudes towards subjects, and often, this influence was tightly tied to teachers' willingness to put effort into their work and passion to convey knowledge to students.

This was especially visible during my high school education. Teachers who showed the energy of liking their job, being passionate about topics and well prepared for their lessons were the ones who motivated me and caught my attention. With teachers who did not match that criteria, I often found it hard to relate to their subject and I would subconsciously dismiss them.

My in-classroom experiences were later rethought as I became more informed on many obstacles teachers face in their everyday work, like lack of autonomy, heavy workload and administrative tasks, and negative work climate. I became aware of teachers' protests, demands, and public views of the teaching profession. These circumstances made me feel guilty for holding my teachers to such strict standards, and it made me think that teachers who start their careers as intrinsically motivated individuals with a calling soon face many obstacles in the Croatian educational system.

Therefore, I became interested in finding out to what extent teachers working in high schools manage to keep their intrinsic motivation and what influence outside stressors and circumstances have on their motivation state.

When exploring the topic to prepare a thesis proposal, it became clear that there is an evident knowledge gap in the field of work motivation of public servants in Croatia, especially teachers. The choice of Self-determination theory is additionally very rarely used in Croatian academia and research, despite its wide applicability.

Therefore, a choice of the topic of work motivation of high school teachers in Croatia was a challenging task, but still recognized as a needed one and an interesting perspective of looking at the education system of my home country.

Hopefully, this piece of research can be a step towards more research in the chosen field and help recognize the needs, but also the efforts of the crucial piece of the educational puzzle – its teachers.

Research Problem

Providing a motivational work environment for employees should be a focal point of the employer if they want to attract and retain quality workers. The specificity of a work environment such as public institutions, especially schools, is a challenging environment to foster motivation because of its centralization by governmental institutions and regulations, making it harder for schools to exercise their own policies fostering motivation. Teachers' demotivation is very common and can be caused by many stressors in their work environment. Some are time constraints, lack of autonomy, and conflicts with parents and authorities (Boljat, 2020). A lack of teacher motivation leads to teacher shortages and declined school performance (Urwick et al., 2005, as cited in Shikalepo, 2020). Like many countries, Croatia has been experiencing a teacher shortage, especially in certain subjects such as science, technology and mathematics (European Commission, 2019).

Even though a problem of teacher shortages and many demotivational factors within the Croatian education system are often discussed in the public space, there is a lack of research on the causes of these processes and factors and a lack of research on the topic of motivation of public servants in general. Additionally, the situation is often rarely researched to determine the "real-life" situation among teachers.

During the preliminary research, a research problem was determined as a need for the determination of motivation states among high school teachers in Croatia and their satisfaction of basic psychological needs based on the Self-determination theory, because of the lack of research in this field.

Objectives and Research Questions

The main objectives of the Master thesis on the topic of work motivation of high-school teachers in Split, Croatia, are to describe the context of the Croatian education system and its possible demotivating factors, identify the state of motivation of teachers according to the Self-determination theory and examine the satisfaction and frustration of the three basic psychological needs: autonomy, competence and relatedness.

The conditions and context of the Croatian education system is planned to be researched through a literature review, as well as the theoretical background, setting a framework for the empirical research.

Through empirical research, I aim to gain insights into the current state of motivation and the participants' satisfaction and frustration of the needs based on the self-determination theory and gain insight into the current situation in the field of high school teachers' motivation in Split, Croatia.

The data will be analyzed to describe the state of motivation of teachers in public high schools and their satisfaction and frustration of needs for autonomy, competence and relatedness.

My objectives, more specifically, are the following:

The main objective of this Master's Thesis is to determine the states of motivation prevailing in high school teachers in Split, Croatia, according to the Self-determination theory, and to determine the state of their needs satisfaction.

Sub-goals are:

- To describe the context of the Croatian education system.
- To determine if intrinsic or extrinsic motivation states prevail among high school teachers in Split,Croatia.
- To determine if differences between the motivation states of teachers in younger age groups and older age groups exist.
- To determine which basic psychological needs are satisfied, and which cause frustration among teachers.

Hypotheses

Four hypotheses connected to the research objectives were set and will be either rejected or confirmed during the data analysis.

- H1: Intrinsic motivation state prevails among high school teachers in Split, Croatia.
- H2: Younger teachers are more intrinsically motivated to work than older ones.
- H3: The need for autonomy is the need in which teachers present the highest frustration.
- H4: The need for competence is the most satisfied need among teachers.

To reach the objectives mentioned above, analysis will be conducted to answer the following research questions:

Main research question: Which motivation states (according to SDT) prevail among high-school teachers in public high schools in Split, Croatia and are the basic psychological needs of teachers satisfied?

Sub-questions:

- Do intrinsic or extrinsic motivation states prevail among teachers in public high schools in Split, Croatia?
- What are the differences in work motivation between older and younger high school teachers in Croatia?
- To what extent are the psychological needs of relatedness, competence, and autonomy satisfied among high school teachers in Croatia?

Literature Review

1. Overview of the Education System in Croatia

1.1. Importance of the national Context

When talking about a crucial part of a country's education system - its teachers- it is essential to understand the context within which they work. To better understand teachers' motivation, we must understand their working conditions, the general atmosphere and structure of the education system, as well as the responsibilities of each part of the system's structure. Therefore, at the beginning, we must look at the bigger picture, which is the overall education system of Croatia.

In the following chapters, an overview of the Croatian education system will be outlined for the following reasons: it is crucial to provide a contextual understanding, including educational structure and processes, since different countries define the roles and responsibilities of teachers differently, as well as policies and reforms that shape these responsibilities, having an impact on the teachers' burden and consequently their motivation (Day, 2012).

The education process in one school or city is not an independent quantity, it presents an interplay of multiple systems because factors in one system influence the operation of others. The microsystem of one classroom interacts and reacts to the operation of the macro system, such as national government and educational policy (Gemmink et al., 2021).

An overview of the country's education system gives us an insight into the socio-economic factors and economic resources that the country invests in education, including teachers' salaries and schools in general. These factors also significantly contribute to teachers' motivation and enthusiasm (UNESCO, 2014).

Lastly, leadership style and school administration and its relationship with teaching staff significantly impact the working environment, workplace climate, level of teachers' autonomy, workload, and, therefore, teachers' motivation (Leithwood & Jantzi, 2005).

1.2. Structure of the Croatian Education System

According to the European Commission (2023), an educational system in Croatia is created to enable every student to develop their potential, achieve personal and academic development, and enter the labor market.

According to the Constitution of the Republic of Croatia (2014, as cited in European Commission, 2023) primary, secondary, and higher education are available to everyone under the same conditions. Most of Croatia's education system is centralized and governed by the Ministry of Science and Education of the Republic of Croatia* and its bodies, such as national agencies. However, private education institutions can be established under legally bounding conditions (European Commission, 2023).

The Croatian education system is divided into early childhood education and care, preschool education, elementary education, high school education, and higher education (European Commission, 2023).

The education process in Croatia starts with Early Education and Care, and this level of education is, as an exception, decentralized by law. Investments and financing of costs fall under the responsibility of local and regional self-government units (European Commission, 2023). Institutions of early education and care (kindergartens) can be established by the Republic of Croatia, local or regional governments, religious organizations, and other legal persons. In the pedagogical year 2022/2023, the municipalities and cities established almost 77 percent of kindergartens in Croatia (European Commission, 2023).

ECEC system constitutes the starting level of the educational process and is divided into three cycles: from the child's six months until the age of one, from one year of age until the age of three, and from the age of three to the start of primary school (European Commission, 2023).

Following the cycle of ECEC is primary and lower secondary education, a single system of compulsory education lasting eight years in Croatia. Children start this stage of education at 6 or 7 and end at 14 or 15 (European Commission, 2023).

*The ministry in the meantime changed its name to Ministry of Science, Education and Youth.

This stage of education includes general education and enables continuation to upper secondary schools. The number of mandatory instruction hours in Croatia is 4 541 hours. These instruction hours are distributed among eight grades, and are significantly lower than the average of the OECD countries amounts to 7 634 hours over nine grades (OECD, 2023).

Primary education can be attended in public and private schools, and programs can be regular and special, with special programs being adjusted to children with disabilities, alternative curricula, or programs in languages and scripts of national minorities (European Commission, 2023). Some primary schools offer extended stay programs, with the possibility of children having organized activities before and after regular classes. This program is often chosen because of the lack of possibility for parents to organize other forms of care for children during their workday, and the activities include languages, communication areas, natural history, mathematical, scientific, and technological skills, and many more (European Commission, 2023).

Croatian primary school level of education allows students to enroll in upper secondary education based on their obtained grades (European Commssion, 2023).

1.2.1. High School Education in Croatia

Upper secondary education - high school education is not mandatory in Croatia; however, almost a hundred percent of students transition from primary school to secondary education. Depending on the type of education program, secondary schools in Croatia are grammar schools, art schools, and vocational schools (European Commission, 2023).

According to European Commission (2023) grammar schools can belong to one of the five types, according to the increased number of teaching hours per subject characteristic for the specific program, namely: general education grammar school program, language grammar school program, classical grammar school program, natural sciences and mathematics grammar school program and natural sciences grammar school program.

Grammar school programs and secondary art schools last four years, while education in vocational schools can last from one to five years, depending on the type of education program for a certain profession. Different programs can be offered in the same school. Also, hybrid

schools provide both grammar and vocational education programs (European Commission, 2023).

In Croatia, 70 percent of 15-19-year-old students enrolled in a vocational program. Comparing this trend to OECD countries' average, which is 37 percent, Croatia has a significantly higher percentage of vocationally educated students than those obtaining grammar school education (OECD, 2023). At the end of their upper secondary education, students can enter the labor market or continue their higher education. To enroll in higher education, pupils must take state matura exams (European Commission, 2023).

Higher education institutions can also be established as public or private institutions. Public higher education institutions are established nationally by the Republic of Croatia and are state financed, but the Constitution guarantees organizational autonomy and academic freedom (European Commission, 2023).

1.3. Cultural Influences on Teaching Profession

In Croatia, the teaching profession was traditionally seen as a respected profession and was among professions that were in Croatian society seen as traditionally high-status professions - doctors and lawyers Today, the teaching profession is often underestimated, both by the society's views and status and by material status (Lazzarich, 2019). Many economic changes, in the transition from socialism to a market economy and societal changes, have affected teachers' status and public perception of their profession (Sindik, 2013).

Work motivation of the Croatian public sector is under a great influence of sociological and cultural factors of the Croatian society that is often described as post socialistic and post-war society. This societal context can often have many demotivating factors such as external focus of control, slow process of change, and low productivity (Sindik, 2013).

Values and norms are other crucial factors influencing a person's behavior, which culture shapes. The same is true within the education system. Teachers in Croatia are often motivated by the feeling of duty to contribute to the intellect and morale of their students, emphasize the importance of education, and contribute to the country's future (Vizek Vidović et al., 2003).

1.4. Socio-economic Factors

Teachers' salaries significantly influence the attractiveness of teaching jobs and remaining in employment. They also comprise the most significant expenditure category in formal education (OECD, 2023). In Croatia, teachers' salaries, like those of other public servants, are stipulated by The Act on Salaries in Public Services (European Commission, 2023). The salary of employees is calculated as the multiplication of the coefficient of the job complexity and the salary base. Additionally, 0.5% is added for each year of service (European Commission, 2023).

Additionally, according to the Agreement on the Allowances in Education and Science (2006, as cited in European Commission, 2023) between the government of Croatia and trade unions, education and science workers have the right to an allowance on top of the basic salary in the amount of 13% of the contracted salary. According to OECD (2023, section Overview of the education system), „on average, annual statutory salaries for upper secondary teachers in general programs with the most prevalent qualification and 15 years of experience are USD 53

456 across the OECD. Croatia's corresponding salary adjusted for purchasing power is USD 32 108, which is equivalent to EUR 16 768."

The average monthly salary for upper secondary school teachers in April 2023 was 1261 EUR net (Ministry of Science and Education, 2023). Croatia has one of the least rewarding salary progression systems among OECD and partner countries. The difference of upper secondary teachers' salaries with long years of service from their starting salary is one of the lowest among OECD countries (OECD, 2023).

For comparison, according to the latest reports, the national average salary in Croatia is approximately EUR 1,630 monthly. After deductions such as income tax and social security contributions, the net average salary in Croatia is around 1,180 EUR (Croatian Bureau of Statistics, 2023).

When it comes the financing of the education sector, Croatia devotes a substantial share of its domestic output to education. In 2020, Croatia invested 4.2% of its GDP on education, lower than the OECD average of 5.1%. However, 47% of that share was channeled to primary and lower secondary education, 29% to tertiary education, and the lowest share was intended for upper secondary education – 24% (OECD, 2023).

1.5. Leadership in Croatian Schools

The managerial role of principals in schools includes four groups of activities- planning, organizing, leading, and evaluating (Staničić et al., 2002, as cited in Burcar, 2014).

When describing the managerial role of principals, many authors put social emphasis on the leader role as an additional part of the managerial job. Even though authors might disagree if the managerial and leadership roles are two distinctive terms, both seem necessary and constitute parts of the principal's role (Burcar, 2014).

Leadership represents the ability to mobilize, lead, and motivate other individuals or groups to apply their skills and resources in the given task or position (Eyal & Roth, 2011).

In education, leadership represents a fundamental role since a leader's influence can significantly impact the educational staff's work and, consequently, the students' work (Eyal & Roth, 2011). Research has shown that school leadership is a crucial element contributing to the advancement of schools and student outcomes (Harris and Lambert, 2003, as cited in Bektaş et al., 2020). Even though, through research, many leadership styles and models appeared, the

most distinct and salient division is the one between the transformational and transactional leadership models (Eyal & Roth, 2011).

The transformational leadership model motivates others to exceed their expectations (Yuki, 1998, as cited in Eyal & Roth, 2011). Leaders with a transformational leadership style gain relatedness from their followers, which results in collective goals and visions. Contrasting the transformational leadership style, the transactional style, also called monitoring leadership, is based on rewards and compliance (Eyal & Roth, 2011).

The transactional style is directed toward complying with the leader's established organizational rules (Yukl, 1998, as cited in Eyal & Roth, 2011). Leaders practicing the transactional model maintain tight control of the progress and quality of work, compliance with rules, and leaders themselves (Quinn, 1988; Spreitzer et al., 1999, as cited in Eyal & Roth, 2011). Therefore, this style does not encourage or support subordinates' innovative thinking and actions but monitors them based on predetermined criteria (Bass, 1985, as cited in Eyal & Roth, 2011).

However, debates are taking place on the nature of leadership, its content, and its process. Traditional leadership sees principals as an individual leadership role as opposed to seeing teachers as leaders (Bektaş et al., 2020). The distributed leadership perspective focuses not on traditional rules determining the principal's role but on practice and cooperation between principals and teachers. The contemporary principal should be an instructional leader to help teachers develop (Pierce & Fenwick, 2002, as cited in Tehseen & Hadi, 2015). They should not only handle the school's operations but also be responsible for the career development of their staff. A successful and quality relationship between staff and their supervisor or principal has been shown to have a noticeable impact on the staff's productivity and loyalty to the school, their intention to stay in the teaching position, and attitudes towards teaching (Minarik et al., 2003, as cited in Tehseen & Hadi, 2015).

In the Croatian educational system, the management of kindergartens and schools is performed by an appointed principal and includes a dual role – management and the role of an expert director. Their duties are organizing and managing the activities and representation of the school institution as well as ensuring the lawfulness and professionalism of their institution's operations. As an expert director, the principal proposes annual work plans and programs, prepares financial plans and reports, and analyzes the work of teachers and other expert

associates. The well-being of educational staff and students, as well as their rights and interests, and safety, should be the utmost priority of school principals (European Commisssion, 2023)

In Croatia, school principals are appointed and relieved by the school's committees and re-appointed for a five-year mandate, after which they can be re-appointed or return to their work as teaching staff (European Commission, 2023).

The person chosen as a principal must comply with the law's stipulated conditions, the foundation act, and the school statute. Analysis of the state in Croatia showed that principals are aware of their role as managers and leaders, and they are achieving these roles through activities of planning, decision-making, organizing, coordinating, communicating, impact, and evaluation (Kovačić & Staničić, 2019).

Over the past three decades, experts have recognized the importance of and worked on their contribution to the field of educational leadership in Croatia. By developing strategies such as the Strategy of Development of the Republic of Croatia in the 21st Century in 2001, programs such as The Concept of Change in Education System in the Republic of Croatia in 2002, and one of the most valuable contributions to the advancement of leadership in Croatian education is the development of the Program for Professional Training of Principals of Elementary and Secondary Schools (Kovač and Staničić, 2019).

In 2013, the Ministry of Science, Education, and Sports formed a working group to propose recommendations for the improvement of the quality of the management of educational institutions (Staničić, 2014, as cited in Kovač & Staničić, 2019). The proposed changes were redefining the role of principals, developing competency standards for principals, institutionalizing the education of principals, and creating a licensing process for the principals. Even though experts have created preconditions for the quality and improvement of the educational leadership in Croatia, the legalization of these documents has been postponed due to political decisions, leaving principals' associations dissatisfied.

Some of the pointed factors contributing to dissatisfaction, according to Drandić (2019, as cited in Kovač & Staničić, 2019), are no adopted competency or qualifications standards, no verifiable criteria for election and re-election of principals, no job security for principals after the end of their mandate, no assistance options despite a broad workload, reduced decision-making autonomy and many more.

Various international studies have ranked Croatia negatively regarding the quality and professionalization of management and leadership in educational institutions. According to European Commission (2013), Croatia is one of the few countries in the European Union that does not provide principals with a training program to prepare them for the role. Additionally, TALIS research (OECD, 2020) showed that according to the principals' reports, Croatia is ranked third country by the number of principals who reported that they were not provided with training for some of their obligations. Furthermore, 45% of principals reported that training acquiring principals' competencies was none or weak.

1.6. Teaching profession in Croatia

Teachers play a crucial role in the learning process and impact the quality of education overall. With their work, they create a detective process to coordinate global and individual objectives of the education process, coordinate their work with other stakeholders, and constantly improve their practices (Kramar, 2012, as cited in Zrno, 2012). For teachers' work to be aligned with the expectations of their practice, their education must enable sufficient knowledge and prepare them for the challenges of the teaching profession; however, following attaining needed knowledge, it is the system's responsibility to provide teachers with working conditions that enabled them to implement their knowledge and their best practices into their practical work.

1.6.1. Education of Teachers

In Croatia, to qualify for the roles of teachers in schools and early education and care, future teachers must undergo specific higher education study programs.

Two primary types of institutions are intended for the education of primary and secondary school teachers. The first one is the Faculty of Teacher Education. This faculty focuses on the education of preschool and primary school teachers (European Commission, 2023).

The second type is educational specialization faculties dedicated to educating specialist teachers. By completing these specialized programs, individuals are educated to teach subjects of their specialization at the corresponding educational levels. Through this educational framework, most teachers at all levels of education are professionally educated and trained at

the tertiary level according to the level of education and age of the children they teach. They are, therefore, highly qualified for their profession (European Commission, 2023)

According to the standards, every teacher must complete a year-long introduction to the profession under the supervision of the assigned mentor, after which they must pass the licensing exam to become qualified teachers. Even though their formal education ends, teachers are encouraged and obliged to continue their education and professional development. They should be allowed to do so through activities provided by education agencies, their places of employment, and other authorized institutions. (European Commission, 2023).

1.6.2. Working Conditions of Teachers in Croatia

The most frequent motivation to pursue the teaching profession is the sense of fulfillment by influencing the development of children and youth and contributing to society. However, extrinsic motivation is also essential in choosing a career path. Job security, reliability of income, and the possibility to combine work with other life responsibilities are moderate to highly important factors when choosing to become a teacher (OECD, 2020).

Working conditions are comprehensive sets of work characteristics that influence the overall quality of a job. According to Cazes, Hijzen, and Saint-Martin (2015, cited in OECD, 2023), working conditions include working hours, contracts, environment of the job, work intensity, career growth possibilities, autonomy of employees, decision making autonomy, teamwork and trust. Working conditions play a significant role in the organization.

Employees' negative perception of their working conditions often leads to their absence from the workplace, health issues such as stress-related conditions and illnesses, and lower productivity and commitment to work. Good working conditions contribute to workers' health, well-being, skills development, and productivity (Edo & Nwosu, 2018).

Purcell, et al. (2003, as cited in Edo & Nwosu, 2018) revealed that employees' productivity depends on the combination of skills, abilities, motivation, and potential to achieve the institution's goals. Good working conditions are crucial in the case of teaching positions since they influence motivation, engagement, well-being, the quality of the working environment, and the high-quality learning process (Bascia & Rottmann, 2011, as cited in OECD, 2020).

Furthermore, the teaching profession's attractiveness depends on employment terms. More attractive working conditions help recruit and retain new talented teachers. Good working conditions go beyond good salaries and focus more on conditions influencing employees' well-being and professional development. Teachers in many education systems worldwide are often deprived of appropriate financial compensation and professional rewards (Crehan, 2016, as cited in OECD). In addition to salary, other essential factors are job security and employment arrangements.

In Croatia, early education and care (ECEC) teachers and teachers in public school institutions are public servants, and their employment contracts are signed for a permanent term. However, they can also be concluded for a fixed time. Fixed-term contracts have a specified duration. After its expiration, the same employer can renew or extend the contract. Fixed-term contracts provide schools with flexibility and are often used to evaluate new teachers; however, these contracts can cause job insecurity and unpredictability (OECD, 2020).

Results of TALIS research (OECD, 2020) show that in Croatia, 90,9 percent of lower secondary school teachers work under a permanent contract. 5,6 percent are working on a fixed-term contract for more than one school year, while 3,5 percent of teachers are working on a fixed-term contract for one school year or less (OECD, 2020).

Younger teachers are more likely to work on fixed-term contracts as probationary periods and are often likely to receive a permanent contract in the future. Termination of the employment contract can be consensual; an employee can unilaterally terminate the contract, and in some cases, the institution may also terminate the contract under legal conditions (European Commission, 2023).

Also, employment can be full-time or part-time, with the possibility of working in several school institutions if an employee can not fulfill full-time working hours in one institution (European Commission, 2023).

Part-time work arrangements are common among workers in OECD countries and can help achieve work-life balance. Many individuals, especially women, often choose them. On the other hand, part-time work can often decelerate career progression and earnings, and working part-time can be involuntary, having negative implications (OECD, 2020).

According to TALIS (OECD, 2020), 17,9 percent of lower secondary teachers work part-time, and no significant difference exists between male and female teachers.

In Croatia, the full-time working hours of teachers in secondary education equal 40 hours in a working week according to the national curricula and include jobs of direct educational work and additional tasks arising from the educational work. Hours of direct educational work are determined according to the subjects and all the additional working tasks and activities of teachers (Narodne Novine, n.d.)

The number of students per teacher averages 14 for every teacher in upper secondary programs in OECD countries. This number is lower in Croatia, with ten students per teacher in general programs and seven students per teaching staff member in vocational upper secondary programs (OECD, 2023).

In Croatia, teaching is a predominately female profession, with early education and care (ECEC) and primary school teachers being almost 100 percent female (99 percent in ECEC and 93 percent in primary schools). In upper secondary education, the situation differs slightly, but still, there is a domination of female teachers, with 67 percent (Eurostat, 2017, as cited in European Commission, 2019).

2. Motivation

People are often concerned with how to move themselves or others to act. No matter what our role is – managers, parents, teachers, we are all trying to motivate others and ourselves to mobilize our efforts and perform tasks (Self-determination Theory, n.d.).

The term *motivation* is derived from the Latin word „movere“ which means „to move“ because motivation provides people with the needed energy to take action (Urhahne & Wijnia, 2023). Motivation is a very complex concept that various scholars have explained throughout history.

Many different authors have defined motivation. For example, according to Robbins (2003) motivation is “the willingness to do something and is conditioned by this action’s ability to satisfy some need for the individual. The need is a physiological or psychological deficiency that makes specific outcomes appear attractive”.

We differentiate two types of motivation: intrinsic and extrinsic motivation. According to Gagne and Deci (2005, as cited in Shikalepo, 2020), intrinsic motivation includes willingness and curiosity to perform a task by the that an employee obtains from within oneself. In contrast, Mahadi and Jafari (2012, as cited in Shikalepo, 2020) explain extrinsic motivation as the external forces that encourage an employee to execute a task. Therefore, in comparative terms, intrinsic motivation comprises the internal forces that make a person perform the job.

3. Theoretical Frameworks on Motivation

Through research, several major theories have been established in the field of motivation, specifically work motivation and education motivation. Each view uses its concepts and terms to describe various aspects of motivated behavior, which makes further research in the field more challenging.

Additionally, motivation researchers have created their terminology, often differentiating from existing theories and concepts (Schunk, 2000, as cited in Urhahne & Wijnia, 2023). With the urge to explain motivation came different explanations and theories. However, according to Urhahne & Wijnia (2023), through the research, theorists try to answer these three common questions:

- What motivates people?
- Why do they become motivated?
- How do they sustain their motivation?

What differentiates these theories is how they answer these three crucial questions.

3.1. Hierarchy of Needs Theory

When we talk about the concept of motivation, especially fulfilling needs as the driver of motivation, the most prominent theory would be Maslow's hierarchy of needs theory.

This theory is a theory in psychology introduced by Abraham Maslow in 1943 in his paper „A Theory of Human Motivation". Even though the theory has experienced criticism over the years, it remains relevant in many spheres of human behavior and organizational functioning today (Jerome, 2013). Maslow's approach is based on three assumptions. First, there is always something that a person is trying to fulfill; second, a need that is fulfilled is no longer compelling as an unfulfilled need; and third, needs are categorized into five categories that are arranged based on their priority (Van der Westhuizen, 1991, as cited in Shikalepo, 2020). Maslow classifies human needs into five categories: physiological needs, safety needs, social needs, esteem needs, and self-actualization needs (Crook, 1997; Van der Westhuizen, 1991, as

cited in Shikalepo, 2020). The theory's central thesis is that low-level needs should be met before high-level needs can be fulfilled.

Therefore, we can talk about Maslow's hierarchy of needs, often represented as the pyramid of needs.

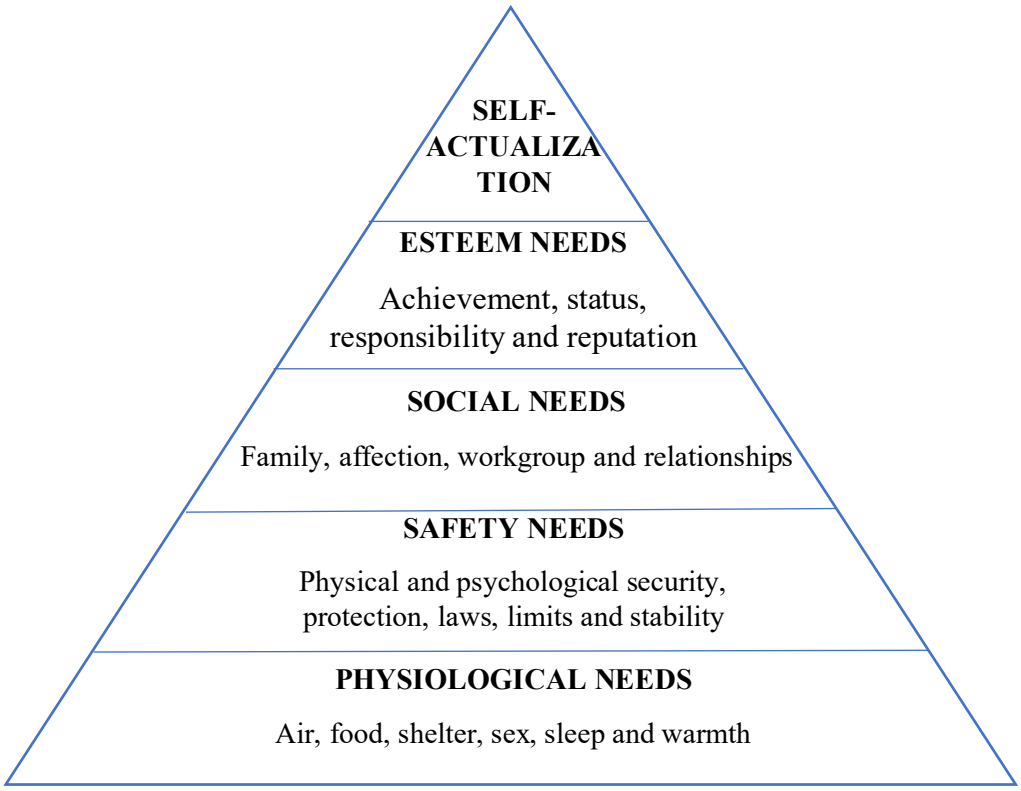

Figure 1 Hierarchy of Needs Pyramid

Made by the author according to Shikalepo (2020).

At the bottom of the order are humans' physiological needs to meet to survive. These needs include air, food, shelter, sex, sleep, and warmth. Without these needs being met, people can not move on to fulfilling other needs or tasks because of the lack of energy or different illnesses (Shikalepo, 2020). For example, when we talk about the work environment, these needs are fulfilled by basic salary and comfortable working conditions (Lunenburg and Ornstein, 2008, as cited in Shikalepo, 2020).

The second level of the pyramid consists of safety needs. These needs include physical and psychological security, protection, laws, limits, and stability. Employees should be provided

with a secure and comfortable working environment that prioritizes providing conditions for their employees to work without fear and anxiety (Kaur, 2013, as cited in Shikalepo, 2020).

At the third level of the hierarchy are social needs. These include family, affection, workgroup, and relationships in a general sense. In the work environment context, they would consist of employees' need to belong to the group, to feel appreciated, approved, and wanted. With the feeling of belonging, it is easier for employees to associate with others and form relationships. In contrast, employees tend to isolate themselves if social needs are unmet, decreasing employee morale and productivity. Organizations and companies prioritizing the fulfillment of social conditions provide opportunities for teamwork, encourage employees to discuss and share knowledge and experiences, and provide good mentoring (Kaur, 2013, as cited in Shikalepo, 2020).

The fourth level of the hierarchy focuses on esteem needs. These include achievement, status, responsibility, and reputation. They include the need to have a certain status and respect and to be provided with opportunities to show competence. If the esteem needs are not fulfilled, employees feel a lack of respect, dignity, and authority (Martin & Joomis, 2007, as cited in Shikalepo, 2020). In the work environment, esteem needs can be encouraged through employee recognition, promotions, and award programs.

The fifth and final level includes self-actualization needs. This need relates to employees distinguishing themselves from others through their capabilities, skills, and achievements. An environment that helps individuals realize their potential and actualize their personality is a motivating environment.

This theory has been recognized as enabling a better understanding of human functioning and motivation in the workplace (Jerome, 2013, as cited in Shikalepo, 2020). It helps explain employees' needs as well as options on how to satisfy them for employers and leaders of organizations. In the context of schools, principals can get examples of how to meet the needs of employees, such as teachers, to help them fit in the organizations, in this case, schools (Shikalepo, 2020).

Even though Maslow's theory of the hierarchy of needs is well-known and famous in management and behavioral literature and studied theory in motivation, it did not escape criticism (Berl et al., 1984). Flower (2014, as cited in Osemeke & Adegboyega, 2018) raises the point that contemporary research and science, with many self-determination scientists and

researchers, instead of five needs presented by Maslow, point out three needs that should be focused on autonomy, relatedness, and competence, rather than a pyramid of needs.

Wahba and Bridwell (2014, as cited in Osemeke & Adegboyega, 2018) extensively reviewed and researched Maslow's theory and found little evidence to support the ranking of the needs in Maslow's theory and the existence of a definite hierarchy. One of the most prominent critics is Maslow's gratification/activation hypothesis, meaning that once one of the needs is at least relatively satisfied, another need or level of needs is activated. Some studies found no correlation between satisfaction of one need and the strength of the next level need (Berl et al., 1984).

Furthermore, the theory has been criticized for not recognizing the difference between the social and intellectual needs of individuals raised in individualistic and collectivist societies. The need for self-actualization might prevail in self-centered societies, whereas in collectivist societies, the need for acceptance will prevail (Cianci and Gambrel, 2003, as cited in Osemeke & Adegboyega, 2018). Despite the criticism of the theory, it has contributed significantly to motivation research and organizational behavior.

3.2. Herzberg's Two-Factor Theory

In 1959, Herzberg, Mausner and Snyderman published the dual-factor theory under the title The Motivation to Work. The theory was influenced by Maslow's hierarchy of needs (Jones, 2011, as cited in Alshmemri et al., 2017).

The two factors influencing job satisfaction are divided into two sets of categories, first – motivation factors and they include the need for self-actualization and the need for growth, achievement, recognition and advancement (Herzberg, 1966, as cited in Alshmemri et al., 2017).

The second category includes hygiene factors, including workplace policies, administration, supervisors and their relationship with employees, working conditions and wages and interpersonal relationships (Herzberg, 1966, as cited in Alshmemri et al., 2017). These hygiene factors make the process of working at a job more pleasant, while motivation factors focus on creating positive attitudes towards a job. Also, hygiene factors can be seen as extrinsic, while motivation ones can be seen as intrinsic. Herzberg's theory is one of the most well-known

theories regarding motivation and job satisfaction (Dion, 2006, as cited in Alshmemri et al., 2017).

3.3. The Rubicon Model of Action Phases

Heinz Heckhausen and Peter Gollwitzer developed the Rubicon Model of Action Phases. The model is named after the historically significant event of Julius Caesar crossing the Rubicon River (Gollwitzer, 1990). The primary motivational model represents the determinants and the course of a motivated action.

In the mid-1980s, Heckhausen and Gollwitzer started to analyze how people control their actions (Keller et al., 2020). This model introduces the basics of human-motivated behavior. It presented four types of expectations in four stages and grouped intrinsic and extrinsic values of action (Heckhausen, 1977, as cited in Urhahne & Wijnia, 2023). The model sets four distinct phases: first, the predecisional phase; second, the postdecisional but still preactional phase; third, the actional phase; and last, the postactional phase (Gollwitzer, 1990). Breaking down the process into different phases helped us understand the process as a whole.

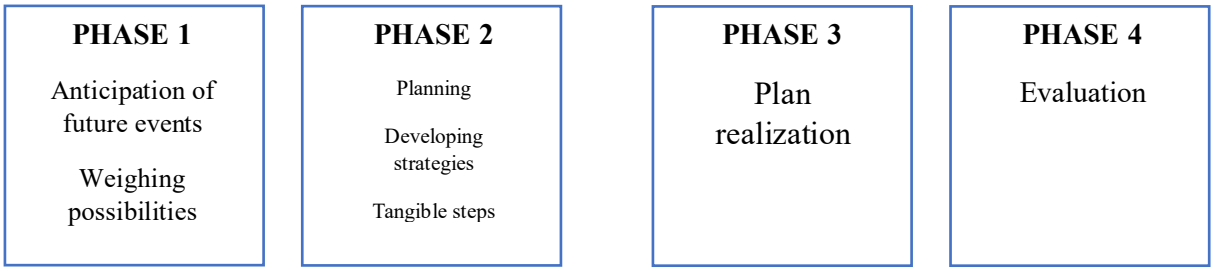

Figure 2 The Rubicon Model

Made by the author according to Heckhausen & Gollwitzer (1987) and Gollwitzer (1990)

The first phase is the predecisional phase. In this initial phase, individuals are considering their desires and wishes. Typical processes are anticipating what will happen, assessing future events, and weighing possibilities (Heckhausen & Gollwitzer, 1987).

The preactional phase follows, and the phenomenon connected to this phase is planning. The individual plans develops strategies, and create sub-goals. The phase is characterized by transforming intention into tangible action steps (Gollwitzer, 1990).

In the third, actional phase, the plan is realized. This phase requires high resilience to overcome obstacles and maintain goal-orientated behavior to achieve objectives (Heckhausen & Gollwitzer, 1987).

After the action is either completed or abandoned, the postactional phase follows. The phenomenon associated with this final phase is evaluation. Evaluation in this phase can help with future planning and goal setting and affect future actions (Gollwitzer, 1990).

Since the Rubicon represents the entire motivation process, it has been used to classify more current motivation theories since it explains human behavior in various contexts. While the Rubicon model gives a comprehensive framework of goal-oriented behavior, it still received criticism.

A significant critique of the model is that it oversimplifies the process of human decision-making and motivation and that the linear order of motivation phases is unrealistic; in reality, these phases often overlap. During the actional phase, people can often re-evaluate their strategy or goals; therefore, the boundaries between phases are not as strict as the model suggests (Baumeister & Vohs, 2007).

The literature on motivation and motivation theories is substantial and still expanding. The theories above are a fraction of this great area of research and present some well-known authors and their views on the motivation process through the past. However, in common, they recognize the importance of needs and their satisfaction as motivating factors of behavior; furthermore, Herzberg's theory mentions extrinsic factors that additionally shape actions, while the Rubicon model explains the actional phases of the process. The wide variety of theories and factors within them presents us with the importance of including intrinsic and extrinsic factors when discussing motivation. The following theory – Self-determination theory- was chosen as the theoretical basis of this study because it acknowledges both intrinsic and extrinsic factors as well as the importance of satisfaction of needs.

4. Self-determination Theory

As previously mentioned, people everywhere, no matter their role, are trying to motivate themselves and others to take action and mobilize their efforts. External factors such as reward systems, evaluation, grades, and external validation often motivate human behavior. However, people are often motivated from within by their interests, curiosity, values, or care. These intrinsic factors do not necessarily have to be rewarded by external influences but make a person's motivation sustainable.

Self-determination is the theory that reveals the interplay of extrinsic and intrinsic motives and human needs (Theory – selfdeterminationtheory.org, n.d.). The theory focuses on the dialect between the growth-oriented human organism seeking development and improvement and the social contexts surrounding it that either support or undermine people's tendency to master new skills and incorporate their experiences into their sense of self (Ryan & Deci, 2002).

Self-determination theory (SDT) presents a formal theory defining intrinsic and extrinsic motivation and the roles of intrinsic and types of extrinsic motivation in cognitive and social development and individual differences. Self-determination theory represents a comprehensive framework that researches human motivation and personality.

SDT is a macro theory of human motivation consisting of five mini-theories: Cognitive Evaluation Theory (CET), Organismic Integration Theory (OIT), Causality Orientations Theory (COT), Basic Psychological Needs Theory (BPNT), and Goal Contents Theory (GCT). It has developed gradually over the past 40 years, initially by Edward L. Deci and Richard M. Ryan, but through time by other scholars (Gagné & Deci, 2014). Its beginnings were focused on the research of intrinsic and extrinsic motivation, with its roots stemming from the early explorations of the concept of intrinsic motivation (Deci & Ryan, 2019, as cited in Urhahne & Wijnia, 2023). However, it later expanded and included research in education, healthcare, sports, parenting, and psychotherapy, as well as the fields of work management and work motivation (Deci and Ryan, 1985, as cited in Deci et al., 2017).

The choice of self-determination theory as a central theory in this research is rooted in its versatile use, among others, in education research and its explanation of the needs that motivate human behavior and the external factors that influence it. SDT focuses on the "nature "of motivation and answers the "why the behavior"question. The underlying assumption of this theory is that human beings are active, growth-oriented organisms that are naturally inclined to

ward integration into larger social structures (Deci & Ryan, 2000, as cited in Tremblay et al., 2009).

As previously mentioned, SDT consists of five mini theories, one of which is the Basic Psychological Needs Theory. This mini theory presents a crucial understanding of motivation based on the Self-Determination Theory.

4.1. Basic Psychological Needs

Even though in everyday life, the word „need“ often reflects desired outcomes, within self-determination theory, the term psychological need is defined in a more focused way as „a psychological nutrient that is essential for individuals' adjustment, integrity, and growth“ (Ryan, 1995, as cited in Vansteenkiste et al., 2020). Satisfaction with these basic psychological needs is essential for an individual's well-being, while frustration leads to passivity and ill-being (Ryan and Deci, 2000; Vansteenkiste and Ryan, 2013, as cited in Vansteenkiste et al., 2020, p.1). Numerous social, personality, and development literature views have described environments that support or undermine effective functioning. The self-determination theory approach focuses on three basic psychological needs, which are the basis for categorizing environments as supporting or antagonistic to human functioning (Ryan & Deci, 2002). At the core of SDT's mini theory – Basic Psychological Needs Theory, is the argument that individuals have a limited set of basic psychological needs. Even though the list of psychological needs is open for additions, according to the SDT, the current list consists of three (Vansteenkiste et al., 2020). These needs are relatedness, competence, and autonomy. Social surroundings and environments that support these three psychological needs support the individual's optimal functioning, while environments that undermine or oppose satisfaction of the mentioned needs are antagonistic (Ryan & Deci, 2002).

4.1.1. Relatedness

Relatedness, as one of the basic psychological needs represented within the self-determination theory, refers to the feeling of connection to others, the feeling of reciprocated care for others, and a sense of belongingness with other individuals, groups or the community in general (Baumeister & Leary, 1995; Bowlby, 1979; Harlow, 1958; Ryan, 1995 as cited in Ryan & Deci, 2002). The need for relatedness is accomplished by connecting to others and feeling significant to other people (Vansteenkiste et al., 2020). Conversely, frustration is caused by social exclusion, alienation, and loneliness.

4.1.2. Competence

In the self-determination theory, competence is determined as a feeling of effectiveness and opportunities to use one's capacities (Deci, 1975; Harter, 1983; White, 1959, as cited in Ryan & Deci, 2002). It concerns the sense and experience of mastery (Vansteenkiste et al., 2020). The psychological need for competence drives people to seek opportunities to enhance their skills and capacities. Competence is a sense of confidence and effectiveness in achieving and performing actions (Ryan & Deci, 2002). The need for competence is satisfied by allowing an individual to engage in activities that provide an opportunity to use and advance skills and expertise. On the contrary, an individual's frustration stems from a sense of ineffectiveness, failure, and helplessness (Vansteenkiste et al., 2020).

4.1.3. Autonomy

The need for autonomy refers to perceiving yourself as the origin or source of own's behavior (deCharms, 1968; Deci and Ryan, 1985; Ryan and Connell, 1989, as cited in Ryan & Deci, 2002). Autonomy is grounded in interest and integrated values. Autonomous individuals experience their actions and behaviors as their self-expression. In case their actions are influenced by outside factors, autonomous individuals feel initiative and value in them. It is essential to mention that autonomy is often confused with independence. However, while independence means not relying on external factors and influences, self-determination theory suggests that an individual can adopt values requested or suggested by others. On the other hand, in the absence of autonomy, individuals can rely on others regarding directions by complimenting or conforming with them. Therefore, autonomy can not be seen as an antagonism of dependence through the lens of the self-determination theory (Ryan & Deci, 2002). When satisfied, the individual experiences a sense of integrity, authenticity, and self-endorsement (Vansteenkiste et al., 2020). Frustrated individual, however, experiences pressure and conflict since their actions are pushed instead of being aligned with their personal values and sense of authenticity. On the other hand, in the absence of autonomy, individuals can rely on others regarding directions by complimenting or conforming with them. (Ryan & Deci, 2002).

4.2. Intrinsic and Extrinsic Motivation

SDT distinguishes between intrinsic and extrinsic motivation. Intrinsic motivation is recognized in activities that one finds inherently exciting and satisfying, and extrinsic motivation is relatively controlled by external factors or can be reasonably autonomous (i.e., self-regulated through an individual's values and goals). Self-determination explains intrinsically motivated behaviors in which action is autonomous and does not depend on controls and reinforcements coming from the external environment (Ryan and Deci, 1985, as cited in Urhahne & Wijnia, 2023).

These two types of motivation can be aligned along a continuum instead of explicitly opposing. At the low end of this continuum is a-motivation (AMO). According to Deci and Ryan (1985, as cited in Banerjee and Halder, 2021), amotivation is „the lack or absence of volitional drive to engage in any activity". The distinction between amotivation and motivation is that amotivation is a result of not valuing an activity (Ryan, 2006, as cited in Eyal & Roth, 2011) and not expecting the activity to result in a desired outcome, or a person not feeling competent to perform the task and accomplish the desired goal (Ryan, 2006, as cited in Eyal & Roth, 2011). In this state, individuals lack the intention to act, or they act passively.

Conversely, motivation is driven by the belief that performing the task or engaging in the behavior will lead to the desired outcome and experience (Tremblay et al., 2009).

Motivation can be divided into extrinsic and intrinsic, and the self-determination theory continues to differentiate motivation states along the continuum by the regulatory state, source of motivation, and motivation regulators (Tremblay et al., 2009).

The state following the state of amotivation on the continuum is the state of *external regulation (ER)*. This state represents doing an activity solely to receive a reward or to avoid punishment. The following stage is *introjected regulation (INTRO)*. Introjected regulation implies regulating

behavior through self-worth occurrences such as self-esteem or guilt. Then, the *identified regulation (IDEN)* refers to actions done because a person identifies with the value or meaning of the activity and accepts it as their own. The following state of motivation on the continuum is *integrated regulation (INTEG)*, which refers to identification with the value of an activity and its integration into the person's sense of self. It is a type of extrinsic motivation that is most fully internalized and is said to be autonomous (Tremblay et al., 2009).

SDT suggests that extrinsically motivated behaviors can be more autonomous if a person internalizes the self-regulation and values of the mentioned behavior.

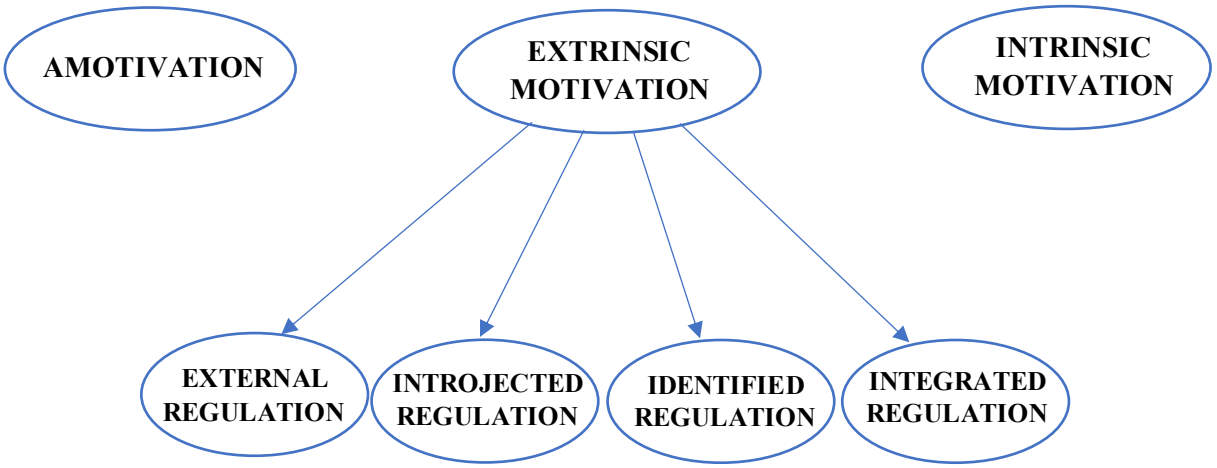

Figure 3 Motivation States according to SDT

Made by the author according to Tremblay et al. (2009)

4.3. Self-determination Theory at Workplace

Self-determination theory suggests that a workplace environment that offers support leads to higher employee satisfaction and overall benefits for the whole organizational effectiveness (Deci et al., 2017). So, the fundamental idea of SDT would be that environmental factors in the workplace impact workers' motivation and experiences and are mediated mainly by a small set of basic psychological needs.

Those factors include reward systems (Lepper & Greene, 1975, as cited in Gagne & Deci, 2014), threats, deadlines, imposed surveillance and evaluations, and competition (Gagne & Deci, 2014).

Basic psychological needs, as already mentioned, include competence, relatedness, and autonomy. These needs are of utmost importance for mental health and well-being and for facilitating effective functioning in social settings (Ryan, 1995, cited in Deci et al., 2017). Lately, we have witnessed a turn in how work motivation is understood and researched. For a long time, "self" did not play a significant role in the research of the motivation process. Many approaches characterized motivation and learning as processes that are fully controllable by the environment and the research neglected constructs such as the construct of self. However, with the growth of cognitive and social-cognitive theories, the concept of "self" appeared in motivation research. (Weiner, 1990, cited in Urhahne and Wijnia, 2023).

SDT's mini theories broadly affect work organizations (Gagne & Deci, 2005, as cited in Deci et al., 2017). SDT model of work motivation has two primary sets of independent variables – social context and individual difference variables.

Social context variables are an organization's needs' support and, on the contrary, threats of basic psychological needs – relatedness, autonomy, and competence. The leadership style within the organization often influences this variable (Deci et al., 2017).

Even though it is essential to consider all three basic psychological needs, research has shown that organizational and leadership support of the need for autonomy alone is highly correlated to the satisfaction of all three needs. This can be explained by the fact that employees who feel a strong sense of autonomy are likelier to feel a connection to their organization and effectiveness (Deci et al., 2017).

The second independent variable, individual differences, includes employees' general causality orientations, such as autonomy orientation, controlled orientation, and impersonal orientation (Deci and Ryan, 1985, as cited in Deci et al., 2017). Autonomy orientation presents a proactive and interested orientation, controlled orientation is focused on external influences to guide one's behaviors, and impersonal orientation lacks intention and is guided by avoiding failure. The second measure of individual differences is aspirations and goals, which can be extrinsic versus intrinsic (Kasser and Ryan, 1996, as cited in Deci et al., 2017).

Between the independent and dependent variables, we find a set of mediators. The first set of mediators is the satisfaction (or frustration) of three basic psychological needs, while the second one is autonomous and/or controlled motivation (Deci et al., 2017).

SDT's consideration of different variables, as well as the social context and individual differences, presents an interesting and broad insight into work motivation and, therefore, will be used as a primary theoretical framework for the analysis of the motivation of high-school teachers as well as environmental factors that influence the state of motivation.

4.4. Teacher Motivation

School education's integral part is its teachers. Their work directly influences learners' learning outcomes and greatly influences students' development of knowledge, skills, and values and their well-being in general. The motivation of teachers plays an enormous role in terms of the overall organizations such as schools, with teachers making the most significant part of school

employees and their work plays a big role in the general work of the institution, but also because students need motivated teachers to be motivated themselves, achieve the objectives of their education and create a stimulating environment. Motivated teachers increase productivity and quality of the education process, which can be reflected in the performance they show in their work with students and their colleagues (Kotherja & Rapti, 2015).

Studies have shown that teachers' autonomous motivation predicts students' autonomous motivation toward learning (Eyal & Roth, 2011). The effort and value put into children's education, especially adolescents, influences the decisions made later in life by students. Also, it affects whether students consider pursuing a teaching career for themselves in the future (OECD, 2020).

However, teaching jobs have lately become less desirable, as shown by the shortages of qualified teachers. The teaching profession has been going through a crisis and has been becoming less attractive to young people (European Commission, 2021). Research on teacher motivation has been developing since the end of the 1990s. However, it has explicitly been motivated by the trends reporting teacher shortages in many Western countries, some of them being the United States, Australia, and European countries like the United Kingdom, Germany, and Norway (Kyriacou & Kunc, 2007; Weiss, 1999, as cited in Han & Yin, 2016).

The characteristics of public educational institutions in Western society are specific and could be possible causes of this negative trend. Some negative characteristics of teaching jobs in Western countries are external restrictions and pressures, reforms, imposed standards, and others (Han & Yin, 2016). These factors often represent controlled motivation, leading to severe effects on teachers' intensity of motivation, work quality, and well-being, with many leading to burnout (Retelsdorf et al., 2009, as cited in Eyal & Roth, 2011). With these trends, there has been an evident urge to research their possible causes, such as limited job opportunities, aging teacher forces, low prestige, and low reward (OECD, 2005, as cited in Han & Yin, 2016).

The topic of teacher motivation is significant since it is closely related to student motivation, teachers' well-being and burnout, and educational reforms (Han & Yin, 2016).

Another topic emerging from literature is the value placed on public respect for qualified teachers and their opinions. OECD's Teaching and Learning International Survey TALIS focused on this question. It showed that among OECD countries that participated in the survey, only 26 percent of teachers believe their profession is valued in society (OECD, 2020). The perception varies significantly from European countries such as France, Slovakia, and Slovenia, on the lowest side of the spectrum, to Asian countries such as Singapore, the United Arab Emirates, and Vietnam, with the highest perception of value. In Croatia, around 10% of teachers believe their profession is valued in society (OECD, 2020).

Significant differences between countries show that teaching can be seen as a prestigious career path in some countries, directly impacting the feeling of value in teachers and being a driving force to remain or choose the profession in the first place. The question of the value of profession or respect is often connected to the question of pay, so it can be quite tempting to make that connection in teaching jobs as well. However, research does not necessarily support the connection between higher salaries and the perceived status of teachers measured by TALIS, nor is it shown in students' learning outcomes. Luxemburg, as the OECD country with the highest teacher salaries, showed below OECD average results in the Program for International Student Assessment (PISA), while Estonia, as an OECD country with below-average salaries of teachers, has the highest performance in PISA, and the perception about the value of their work is close to the OECD average (OECD, 2020).

Although much has been talked about the low pay incentives as a reason for low teacher motivation, research shows that such actions can be counterproductive (Bishay, 1996, as cited in Remijan, 2014). Therefore, looking at more profound factors impacting teachers' motivation and job satisfaction is essential. Most teachers who join this profession are motivated to make

changes within society and positively influence the lives of children and young people. However, what they encounter in the workplace is often a high level of administration, a low level of support, and a hostile work environment, resulting in stress and burnout (OECD, 2020). An essential factor influencing a person's motivation is autonomy, especially if we look at motivation through self-determination theory. The importance of autonomy is stressed in its being recognized as a need. TALIS 2018 showed that around 90% of teachers lack autonomy regarding the curriculum and school policy decisions (OECD, 2020). This lack of autonomy often disrupts and decelerates innovative teaching practices. Therefore, teachers need job positions that provide motivation potential, including psychological forces that direct their behavior in a positive direction and freedom to make autonomous decisions (Mitchell, 1982, as cited in Remijan, 2014).

According to Eyal and Roth (2011), principals' leadership style is essential to teachers' motivation. The authors differentiate between two polar leadership styles: transformational and transactional. Transformational leadership includes individualized consideration and intellectual stimulation and cultivates teachers' autonomy. This approach leads to greater intrinsic motivation driven by teachers' identification with the school's goals and objectives and the vision of the institution and leaders. On the other hand, the transactional leadership style is driven by contingent rewards, decreasing an individual's self-determination and intrinsic motivation by focusing on extrinsic rewards. Leaders applying this leadership style are often recognized as a source of control and create an environment where individuals experience high coercion and lower levels of self-determination.

4.5. Self-determination Theory and Teacher Motivation

Bien et al. (2011, as cited in Perlman, 2018) found that intrinsically motivated teachers create a learning setting in which students' motivation is harvested. On the contrary, teachers with lower self-determination are less involved and disengaged.

This research uses self-determination theory as the perspective through which teachers' motivation is viewed. The theory focuses on satisfying three basic psychological needs: competence, autonomy, and relatedness. The importance of satisfying these needs is also evident in the research of the school environment.

Impairment of the satisfaction of the need for autonomy leads to decreased intrinsic motivation and reduced support for student autonomy (Pelletier et al.; Reeve, 2009, as cited in Janke et al., 2015).

When it comes to competence, teachers who feel a strong sense of satisfaction with the need for competence feel less stressed and more enthusiastic about their job compared to their colleagues who report less sense of this need's satisfaction (Caprara, Barbaranelli, Steca, & Malone, 2006; Skaalvik & Skaalvik, 2010, as cited in Janke et al., 2015).

Lastly, the satisfaction of the need for relatedness dramatically impacts the individual's motivation and well-being in the work environment (Baard, Deci & Ryan, 2004, as cited in Janke et al., 2015).

Self-determination theory, because of its widespread utilization and application and very advanced research in the field of work motivation, has also been applied to many pieces of research researching the motivation of educational staff, specifically teachers. Its focus on essential psychological needs satisfaction can, therefore, be used to explore the state of motivation of teachers in this given context and provide us with insight into the working environment of public high schools in Split, Croatia, and if they encourage the well-being of its employees.

5. Empirical Research

5.1. Introduction

This chapter will explain the methodology relevant to the empirical part of the research implemented in this study. It will review the literature on research methods and explain the chosen methods. Furthermore, it will explain in detail the data collection instruments and the implementation of the research.

5.2. Research Design

Research is "the process of collecting, analyzing, and interpreting data to understand a phenomenon" (Leedy & Ormrod, 2001, as cited in Williams, 2007). The research process involves defining the main objective, collecting, managing the data, and communicating the findings. Research starts with at least one question of the researchers' interest (Williams, 2007). One of the essential decisions in research is the choice of research methodology or approach (Almulla, 2020).

Research methodology can be described as the range of approaches and methods used for interpretation, explanation and prediction (Cohen et al., 2007). The three typical approaches are quantitative, qualitative, and mixed methods (Williams, 2007). The appropriate approach is chosen according to research questions and objectives to achieve the research goal.

In educational fields, using descriptive methods is common since descriptive studies describe and interpret the current state of the phenomenon without researchers having control over variables (Denscombe, 2010, as cited in Almulla, 2020). The descriptive method is an appropriate choice for the studies of the educational field since it can gather individuals' beliefs, opinions, and perceptions of the situations (Lodico et al., 2010, as cited in Almulla, 2020). Within the descriptive method, researchers can use various approaches such as surveys, case studies, comparative studies, evaluation, ethnographic studies, and action research (Verma & Mallick, 1999, as cited in Almulla, 2020).

Descriptive survey research was used for this master's thesis. According to Lodico et al. (2010, as cited in Almulla, 2020), that approach is one of the most common quantitative techniques used in educational field research.

Research surveys can be conducted through questionnaires and structured interviews, and data can be collected through either cross-sectional or longitudinal studies (Cohen et al., 2007). The

cross-sectional approach collects data at one point, while longitudinal studies collect data over time with the same sample (Gilbert, 2008, as cited in Almulla, 2020). The advantage of the cross-sectional study is that it can be implemented quickly and cover a larger sample.

In contrast, longitudinal studies require extended periods and have a risk of drop-out (Cohen et al., 2007).

Because of time limitations imposed by the format of the master thesis, the present study used a cross-sectional approach. Although surveys make up the most considerable portion of educational field research because of their suitability for gathering factual information, some limitations are worth mentioning. According to Denscombe (2010, as cited in Almulla, 2020), survey data can lack in-depth details of the phenomenon researched. Furthermore, researchers often do not have personal contact with respondents, especially in the case of online questionnaires, which can cause a lack of collaboration of intended participants or inaccuracy in the responses (Glasow, 2005, as cited in Almulla, 2020).

5.3. Data Collection Methods

Instruments utilized in the present study were chosen based on Self-determination theory, which was chosen as a central theoretical framework of the study, as well the capacity of instruments to answer the set research questions and achieve research objectives.

An online questionnaire was developed that consists of basic sociodemographic questions and two scales. Each of the elements of the questionnaire is described in the following sub-chapters.

5.3.1. Sociodemographic Questions

At the beginning of the survey, participants were asked to state their gender, age, and education level and answer questions connected to their profession – years of service, type of contract and working hours, as well as the education program of the school they work in.

5.3.2. Multidimensional Work Motivation Scale (MWMS)

Self-determination proposes a multidimensional view of motivation, from amotivation to extrinsic and intrinsic motivation. The Multidimensional Work Motivation Scale (MWMS) assesses work motivation at the domain level of analysis (Vallerand, 1997, as cited in Gagné & Deci, 2005).

MWMS is a 19-item scale that assesses five types of regulation according to SDT: amotivation, external, introjected, identified regulation, and intrinsic motivation (Trépanier et al., 2023).

Each of the 19 items is formed as a statement, and participants are asked to rate their level of agreement on a scale from 1 (Not at all) to 7 (Completely/entirely).

To capture differences more comprehensively in external regulation and introjected regulation, MWMS distinguishes two subtypes of each regulation and includes items that focus on achieving desired outcomes and feelings, for example, praise (as an external) or sense of self-worth (introjected), and items that focus on avoiding undesirable outcomes, for example, avoiding criticism (external), and sense of shame (introjected). In addition, the MWMS considers two types of external regulation – material (e.g., money) and social rewards (e.g., praise) – to help better capture the external motivators present in the work environment (Trépanier et al., 2023).

The scale was validated in seven languages, among which are English and Croatian. The version of the Multidimensional Work Motivation Scale (MWMS) used for the empirical research of this study was a Croatian version of the scale, tested and validated by Smokrović et al. (2018). The Croatian version of the scale was reviewed, is valid, and translated items represent constructs represented in the original English version (Smokrović et al., 2018).

The Croatian version was used in the online questionnaire sent to possible respondents to reach a more significant number of respondents by avoiding the demotivating effect of using a foreign language to participate in the research.

5.3.3. Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS)

Within the Basic psychological need theory, satisfaction with the needs for autonomy, competence, and relatedness are focal points that encourage growth (Deci & Ryan, 2000, as cited in Van der Kaap-Deeder et al., 2020).

The Basic Psychological Need Satisfaction and Frustration Scale was developed to recognize the satisfaction and frustration and includes a balanced combination of both items. The scale consists of 24 items – four per each of the items - autonomy satisfaction, autonomy frustration, relatedness satisfaction, relatedness frustration, competence satisfaction, and competence frustration (Van der Kaap-Deeder et al., 2020).

Each item is expressed as a statement, and the items are mixed. Respondents have to rate their level of agreement on a scale from 1 (Completely not true) to 5 (Completely true).

For this study, I have translated the Basic Psychological Needs Satisfaction and Frustration Scale from the original English version and validated Serbian version because of the very close similarity of the languages.

5.4. Sampling Procedures

The study was conducted in Split – the second largest city in Croatia, among teachers working in public high schools. The targeted population was all the teachers working in public high schools in Split, Croatia. Split has 22 public high schools. However, information on the exact number of teachers working at each school is limited – some schools provide such information online, while others do not.

Seventeen schools provide information about the number of teachers employed in their schools. Among 17 schools, 956 teachers are employed. Based on this information, we can assume that in 22 schools, around 1249 teachers work.

Self-selection was used as a sampling method. As a sampling strategy, self-selection is used in a wide range of research, most commonly with surveys that researchers share and invite participants to participate.

Data collection took place in March and April 2024. The principals and administration staff of all 22 public high schools (two art schools, six grammar schools, and sixteen vocational schools) have been contacted by email, and an online questionnaire with a request to distribute the questionnaire to the school's teaching staff has been sent. It was emphasized that the participation was voluntary and anonymous and that the results would be used solely for research.

5.5. Limitations

The process of data collection – both the literature review and empirical research had its limitations and challenges.

In the literature review part of the research, a lack of online information has been recognized, such as information about the exact number of employed teachers at each school and more detailed information regarding the working conditions of high school teachers in contrast to information about elementary education teachers. It has also been recognized that most of the information was available on two sources – European Commission and OECD, making the access to information limited and not as versatile.

Regarding the empirical part of the research, It is essential to mention that there is a possibility of non-response bias. Non-response bias is introduced when "some members of the selected sample are unable or unwilling to complete the survey. The extent of bias depends on both the incidence of nonresponse and on how nonrespondents differ from respondents on variables of interest" (Alvarez & VanBeselaere, 2005, p. 958)

When it comes to internet surveys, these obstacles causing non-response bias can be difficulties in the usage of technology or internet connection problems (Alvarez & VanBeselaere, 2005).

Furthermore, since the primarly contacted people were principals and administration staff, the ability to reach teachers depended on their willingness to forward the online questionnaire to their teachers.

There is also a possibility, specific to the work environment of schools with a heavy workload, that teachers with higher work motivation might also be the teachers who are more willing to participate in non-obligatory activities, including filling out surveys. We must consider these possibilities when we look at the research results and the response rate.

6. Data Analysis

6.1. Introduction

This study was implemented to describe and determine the motivation of high school teachers. Based on the Self-determination theory, the purpose was to discover the states of motivation and the sense of the basic psychological needs satisfaction and frustration among the participants. This study used a cross-sectional quantitative research approach.

Quantitative data was collected using the online questionnaire.

6.2. Response Rate

The questionnaire was created online and sent to the principals and administrative staff of Split, Croatia's 22 public high schools. Schools were previously contacted by phone, informed about the research, and asked for cooperation.

Responses were collected between March 25 and April 12. The total number of participants was 122, making the response rate of 9.77%.

All the surveys were completed, and there were no incomplete answers. There have been no item nonresponses.

When it comes to the school programs of the teachers who participated, the highest number of participants work at vocational schools – 82 of them (67.2%), followed by grammar schools – 30 participants (24.6%) and lastly, art schools – 10 participants (8.2%).

School Program		Frequency	Valid Percent	Cumulative Percent
Valid	Vocational school	82	67.2	67.2
	Grammar school	30	24.6	91.8
	Art school	10	8.2	100.0
	Total	122	100.0	

Table 1 School Program of the School Participants work in

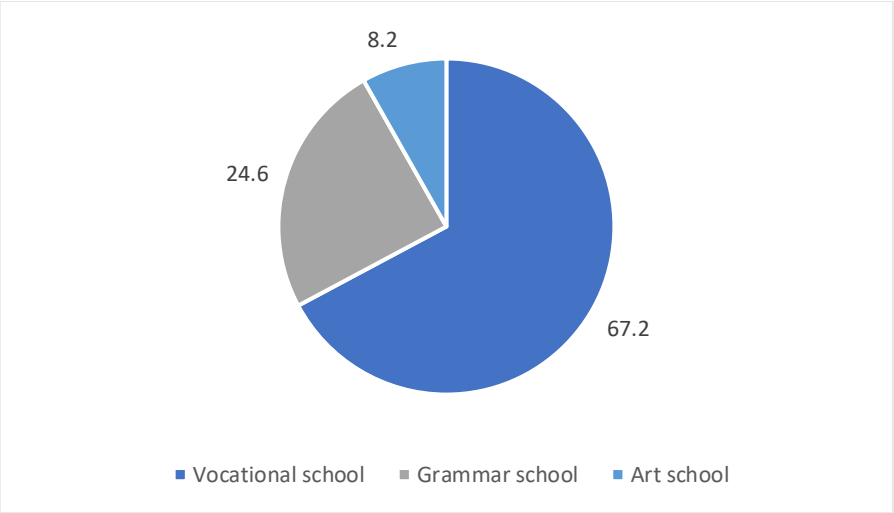

Figure 4 School Program of the School Participants work in

6.3. Sociodemographic Characteristics of the Sample

Some general sociodemographic characteristics of the sample were collected through the questionnaire.

Sociodemographic factors describe the population's characteristics, often including gender, age, education, and income (Lund et al., 2022).

Descriptive analysis below provides a description of the characteristics and demographic information about participants.

6.3.1. Gender

The table presents the frequencies and percentages based on the gender of participants. Of the 122 participants, 95 (77.9 %) were female and 27 (22.1 %) were male.

Gender		Frequency	Valid Percent
Valid	Female	95	77.9
	Male	27	22.1
	Total	122	100.0

Table 2 Gender of Participants

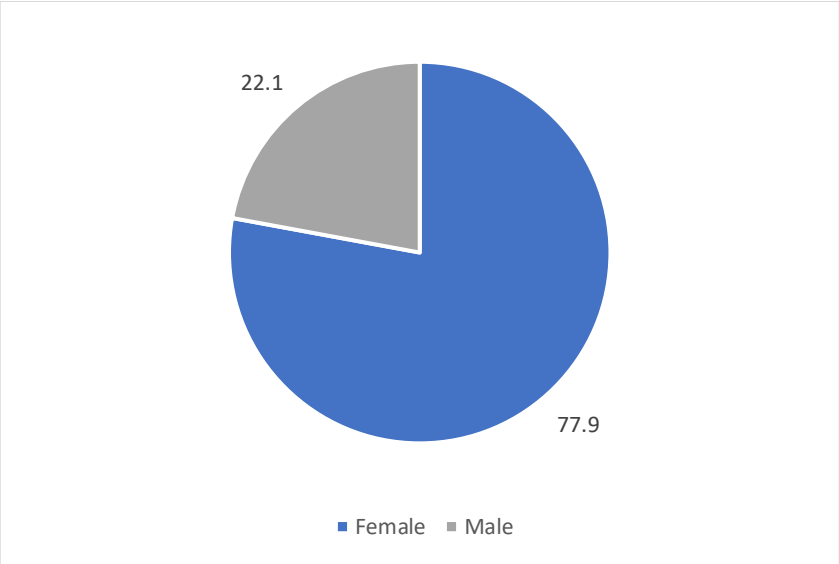

Figure 5 Gender of Participants

6.3.2. Age

The age of participants was categorized into six age categories. The largest age group of participants is the age group between 56 and 65 years old, with 36 participants belonging to this age group (29.5%), followed by the age group 46 – 55 with 35 participants (28.7%), 36 – 45 with 33 participants (27.0%) and the 18 participants in the age group between 26 and 35 years old. There were no participants between the ages of 18 and 25, nor were there any people over 65.

	Age	Frequency	Valid Percent
Valid	26-35 years	18	14.8
	36-45 years	33	27.0
	46-55 years	35	28.7
	56-65 years	36	29.5
	Total	122	100.0

Table 3 Age of Participants

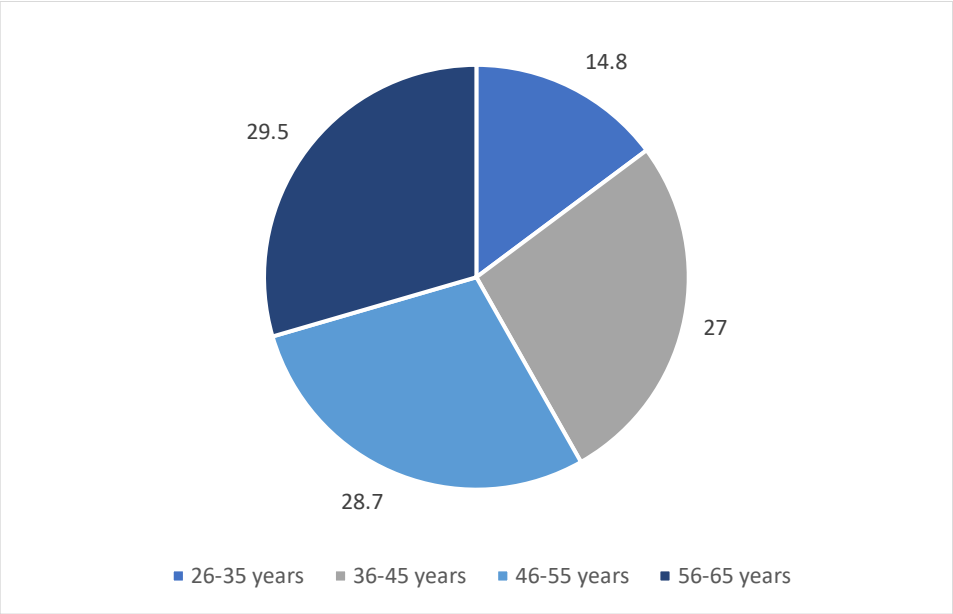

Figure 6 Age of Participants

6.3.3. Education

Participants were asked about the highest level of education they had obtained.

The highest percentage (88.5%) of participants have completed university education. In comparison, 11 of the participants have obtained a Master's or Doctoral degree (9%), two completed vocational school education (1.6%), and one participant has completed college education (0.8%).

	Education level	Frequency	Valid Percent
Valid	Completed vocational high school lasting four years	2	1.6
	Completed higher education institution (College)	1	0.8
	Completed Master's/Doctoral degree	11	9.0
	Completed university education (Undergraduate degree)	108	88.5
	Total	122	100.0

Table 4 Education Level of Participants

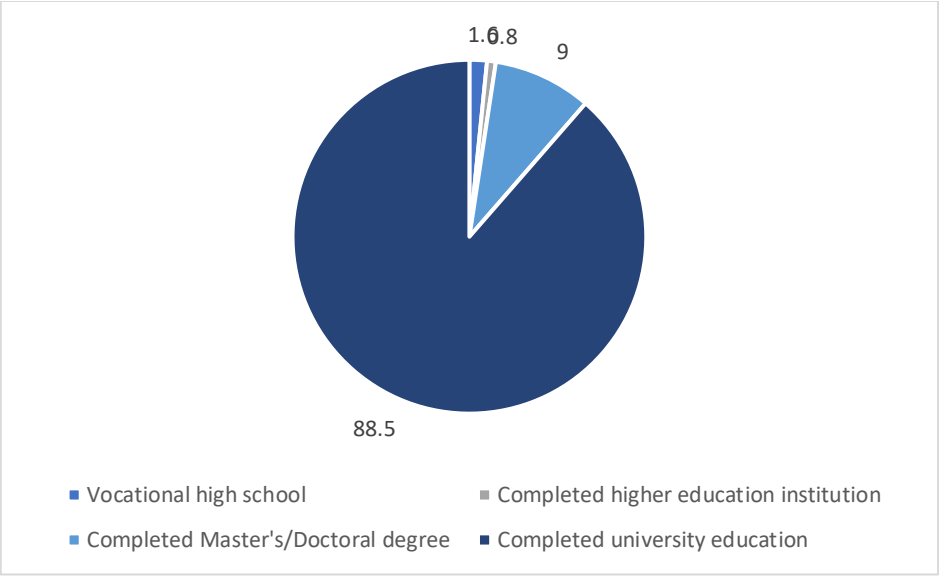

Figure 7 Education Level of Participants

6.3.4. Work experience

When it comes to the work experience of the participants, participants were asked about their overall work experience as teachers and the years of employment they have spent at their current place of employment – school.

Work experience		Frequency	Valid Percent
Valid	Up to 5 years	17	13.9
	6-15 years	42	34.4
	16-25 years	25	20.5
	More than 25 years	38	31.1
	Total	122	100.0

Table 5 Years of Work Experience of Participants

The highest number of participants, 42, have been working as teachers between 6 and 15 years (34.4%). The following are participants with over 25 years of experience, 38 of them (31.1%). The lowest number of participants expressed that they have been working as teachers for less than five years (13.9%).

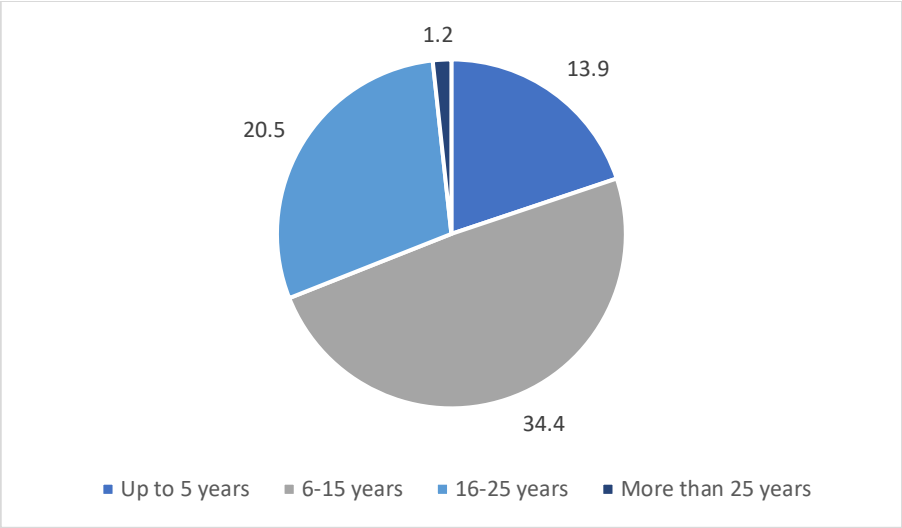

Figure 8 Years of Work Experience

The survey showed that 31.1% of participants have been working at their current place of employment for between three and ten years, followed by 32 participants (26.2%) working between eleven and twenty years. The lowest percentage (9.8%) have only been working at the current school for less than two years.

Work experience at the current place of employment		Frequency	Valid Percent
Valid	up to 2 years	12	9.8
	3-10 years	38	31.1
	11-20 years	32	26.2
	21-25 years	13	10.7
	More than 25 years	27	22.1
	Total	122	100.0

Table 6 Work Experience at the current Place of Employment

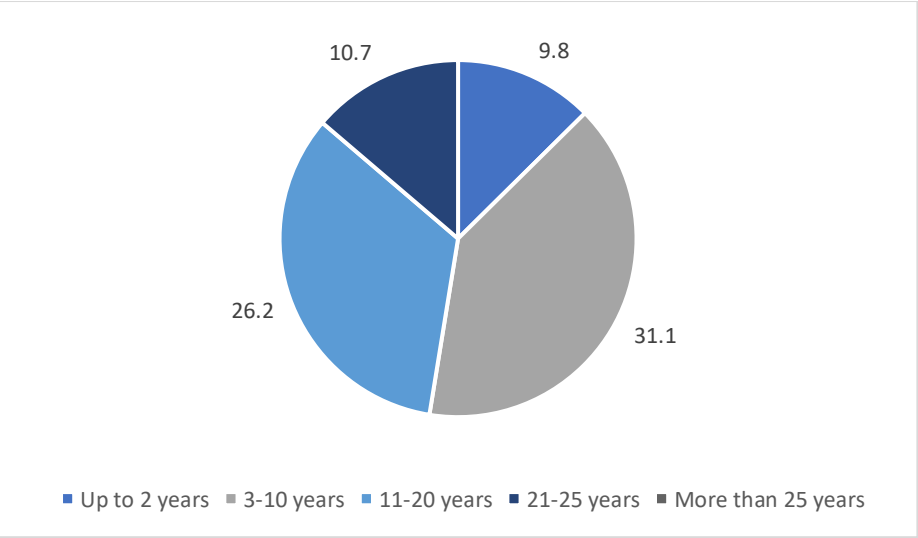

Figure 9 Work Experience at the current Place of Employment

6.3.5. Employment Terms

In the following questionnaire questions, participants were asked about their employment terms - their contract length and working hours. 110 participants (90.2%) have permanent term contracts, 6 of them (4.9%) fixed-term contracts lasting less than a year, 5 of them (4.1%) fixed term contract longer than a year, and one teacher (0.8%) declared that they are working as a substitute teacher.

Employment contract		Frequency	Valid Percent
Valid	Permanent term	110	90.2
	Fixed term (less than a year)	6	4.9
	Fixed term (longer than a year)	5	4.1
	Other (substitute)	1	0.8
	Total	122	100.0

Table 7 Employment Contract of Participants

According to TALIS (OECD, 2020), more than 90 percent of lower secondary school teachers work under a permanent contract. According to our results, that pattern is also evident in our sample of high school teachers.

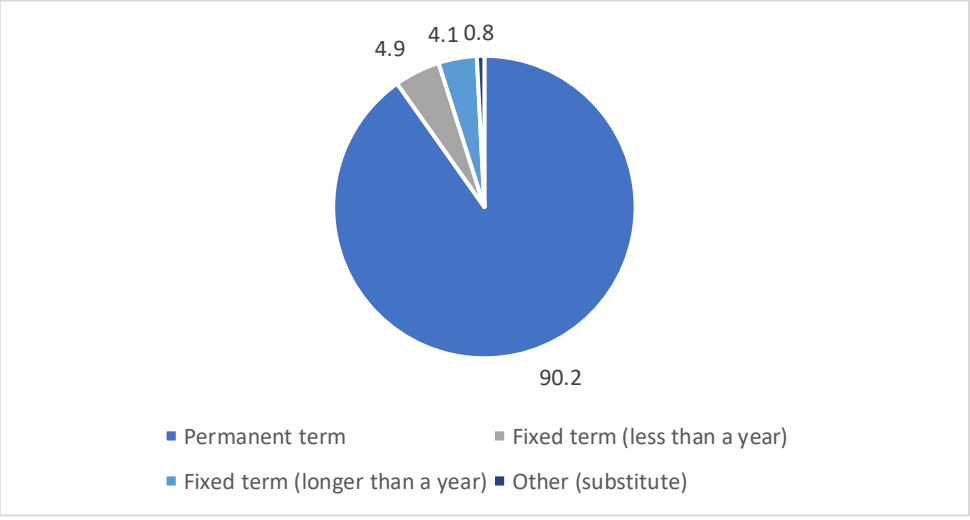

Figure 10 Employment Contract of Participants

Regarding working hours, most participants (80.3%) work full-time (40 hours per week), while 19.7% work part-time.

Working hours		Frequency	Valid Percent
Valid	Full-time	98	80.3
	Part-time	24	19.7
	Total	122	100.0

Table 8 Working Hours of Participants

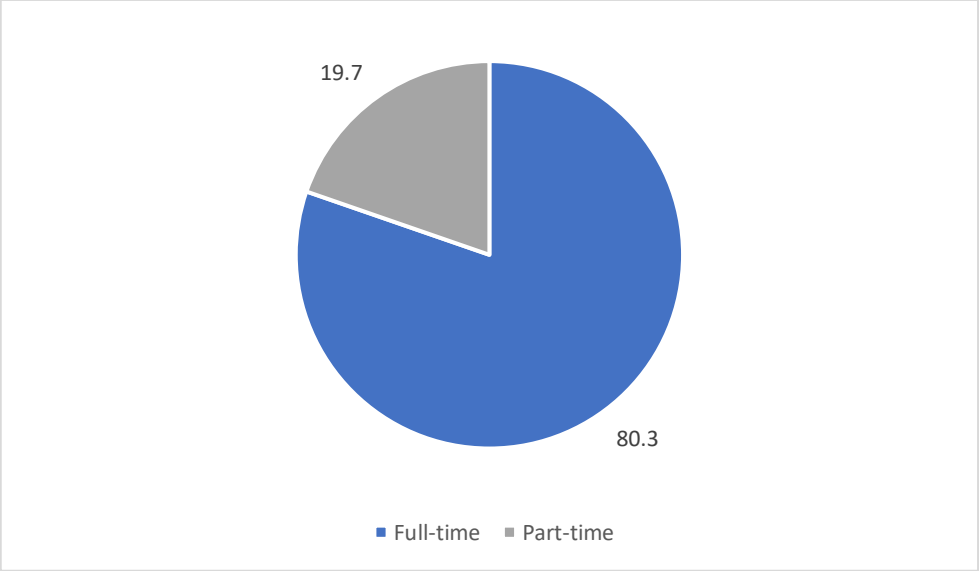

Figure 11 Working Hours of Participants

6.4. Multidimensional Work Motivation Scale (MWMS)

This chapter will present the results of the Multidimensional Work Motivation Scale.

Each of the 19 items is formed as a statement, and participants are asked to "Rate to what extent are the following propositions reasons to make efforts/get involved in your job?".

Their level of agreement was marked on a scale of 1 - Not at all, 2 – Not really, 3 – A little, 4 – Moderate, 5 – Strong, 6 – Very strong, and 7 – Completely/entirely.

In the below table, all the statements from the questionnaire are presented. Every statement corresponds to one state of motivation according to self-determination theory. The statements are grouped into categories reflecting various motivation types: External Regulation (Avoidance and Approach - Social and Material), Introjection (Approach and Avoidance), Intrinsic Motivation, Identified Motivation, and Amotivation. For each statement and its corresponding motivation state, the mean has been calculated to recognize the expressed motivation states represented by all 122 research participants. Mean, also known as the average, is a sum of data points divided by the total number of data points (Turner, 2013)

Multidimensional Work Motivation Scale (MWMS)			
Item	**N**	**Mean**	**Std. Deviation**
EXTERNAL REGULATION AVOIDANCE – SOCIAL Because I risk losing my job if I don't put enough effort into it.	122	2.52	1.643
INTROJECTION APPROACH Because it makes me feel proud of myself.	122	5.48	1.478
EXTERNAL REGULATION AVOIDANCE – SOCIAL To avoid being criticized by others.	122	2.85	1.723
INTRINSIC MOTIVATION Because I have fun doing my job.	122	5.20	1.504
EXTERNAL REGULATION APPROACH – MATERIAL Because others will reward me financially only if I put enough effort into my job.	122	2.25	1.654
INTROJECTION AVOIDANCE Because otherwise I will feel ashamed of myself.	122	4.45	1.907
IDENTIFIED MOTIVATION Because putting effort into this job aligns with my personal values.	122	5.81	1.399
AMOTIVATION I don't, because I really feel that I'm wasting my time at work.	122	1.63	1.234
INTRINSIC MOTIVATION Because what I do at my work is exciting.	122	4.70	1.557
AMOTIVATION I don't know why I'm doing this job, it's pointless work.	122	1.54	1.193
EXTERNAL REGULATION APPROACH – SOCIAL Because others will respect me more.	122	2.89	1.685
INTROJECTION APPROACH Because I have to prove to myself that I can.	122	4.01	2.010
INTROJECTION AVOIDANCE Because otherwise I will feel bad about myself.	122	5.04	1.856
AMOTIVATION I do little because I don't think this work is worth putting effort into.	122	1.44	1.061

EXTERNAL REGULATION APPROACH – SOCIAL To get others' approval.	122	2.41	1.470
EXTERNAL REGULATION APPROACH – MATERIAL Because others offer me greater job security if I put enough effort in my job.	122	2.23	1.498
IDENTIFIED MOTIVATION Because I personally consider it important to put efforts in this job.	122	5.74	1.509
INTRINSIC MOTIVATION Because the work I do is interesting.	122	5.64	1.391
IDENTIFIED MOTIVATION Because putting effort into this job has personal significance to me.	122	5.72	1.422
Valid N (listwise)	122		

Table 9 Mean and Standard Deviation of Statements in Multidimensional Work Motivation Scale (MWMS)

From the above table, it can be concluded that statements reflecting the state of identified motivation achieved the highest average - "Because putting efforts in this job aligns with my personal values." (Mean = 5.81, SD = 1.399), "Because I personally consider it important to put efforts in this job." (Mean = 5.74, SD = 1.509) and "Because putting efforts in this job has personal significance to me." (Mean = 5.72, SD = 1.422))

On the contrary, the lowest means are found in the statements corresponding to the state of amotivation - "I don't because I really feel that I'm wasting my time at work." (Mean = 1.63, SD = 1.234), "I don't know why I'm doing this job, it's pointless work." (Mean = 1.54, SD = 1.193) and "I do little because I don't think this work is worth putting effort into." (Mean = 1.44, SD = 1.061)).

Standard deviation is the average deviation of the value of a numerical characteristic from the mean. According to the table above, the most significant difference among participants is seen in statements "Because I have to prove to myself that I can." (2.010) representing the Introjection Approach and "Because otherwise I will feel ashamed of myself." (1.907) reflecting Introjection Avoidance. Participants stated the most homogeneous opinions in statements "I do little because I don't think this work is worth putting effort into." (1.061) and "I don't, because I really feel that I'm wasting my time at work." (1.234). Both units represent the state of Amotivation.

6.4.1. Motivation States of the Sample

Further analysis has been conducted to determine which motivation state prevails in each participant. New variables were computed by adding the values of agreement for each statement reflecting each motivation statement.

For example, values of agreement with statements "Because it makes me feel proud of myself." and "Because I have to prove to myself that I can." have been added and represent a new variable labeled "Introjection Approach."

Since the three motivation states are reflected in three statements in the scale, and the remaining five states are represented by two statements each, each value was divided by the number of statements to compare them.

Furthermore, the scores of each participant were analyzed individually to determine the highest agreement score and to determine which motivation state it presented. The results of this analysis can be seen below.

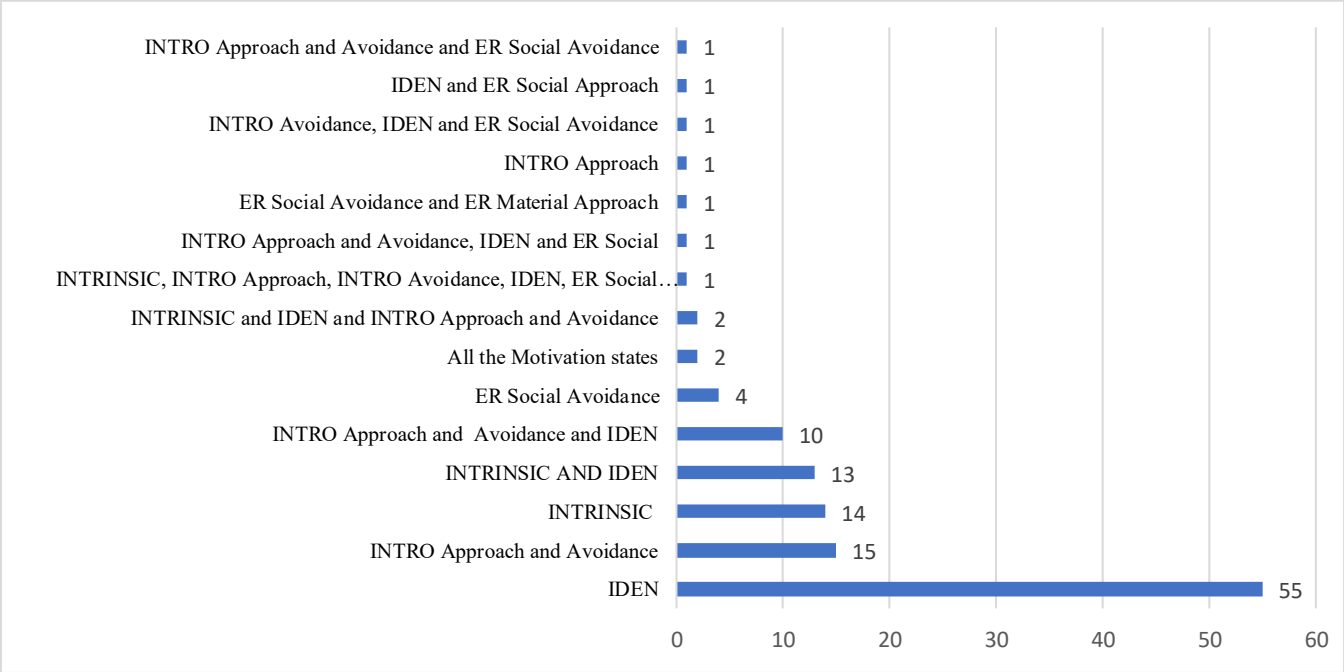

Figure 12 Motivation States of Participants

According to the analysis, 55 participants have shown the highest agreement score with Identified Motivation (IDEN). The following are 15 participants with equal agreement scores

with Introjection Approach (INTRO Approach) and Introjection Avoidance (INTRO Avoidance). The third highest agreement score is Intrinsic Motivation (INTRINSIC), with 14 participants scoring the highest in that motivation state. The following are 13 participants with equal scores of agreement with the Intrinsic Motivation (INTRINSIC) and Identified Motivation (IDEN), while 10 participants have equal scores of Introjection Approach (INTRO Approach), Introjection Avoidance (INTRO Avoidance) and Identified Motivation (IDEN).

The remaining participants expressed equal agreement scores in the other two or more motivation states that were not previously mentioned.

Two results can be considered invalid since they show equal agreement scores with all the motivation states.

The results show that Identified Motivation is the motivation state with the highest agreement score among most participants.

6.5. Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS)

The Basic Psychological Need Satisfaction and Frustration Scale aimed to determine the perception of satisfaction, or frustration, of the three basic psychological needs – autonomy, competence, and relatedness of teachers in their working environment.

In the table below, the means of each statement are shown. Participants were asked to „indicate how much you agree with each of the following statements given your experiences at this job in the past four weeks." The offered answers ranged from 1 – Strongly disagree to 5 – Strongly agree.

Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS)			
	N	**Mean**	**Std. Deviation**
AUTONOMY SATISFACTION At work, I feel a sense of choice and freedom in the things I undertake.	122	3.82	1.136
RELATEDNESS FRUSTRATION I feel excluded from the group I want to belong to at work.	122	1.66	1.125
COMPETENCE SATISFACTION I feel confident that I can do things well in my job.	122	4.32	.836
RELATEDNESS SATISFACTION I feel that the people I care about at work also care about me.	122	4.15	.897
AUTONOMY FRUSTRATION Most of the things I do at my job feel like "I have to."	122	2.03	1.060
COMPETENCE FRUSTRATION When I am at work, I have serious doubts about whether I can do things well.	122	1.52	.902
AUTONOMY SATISFACTION I feel that my decisions on my job reflect what I really want.	122	3.54	1.077
RELATEDNESS FRUSTRATION I feel that people who are important to me at work are cold and distant towards me.	122	1.51	.855
COMPETENCE SATISFACTION At work, I feel capable of what I do.	122	4.40	.810
AUTONOMY FRUSTRATION I feel forced to do many things at my job that I wouldn't choose to do.	122	2.11	1.027

COMPETENCE FRUSTRATION I feel disappointed with my performance in my job.	122	1.71	1.008
RELATEDNESS SATISFACTION I feel connected with people who care for me at work and for whom I care at work.	122	3.98	1.060
AUTONOMY SATISFACTION I feel my choices in my job express who I really am.	122	3.96	.913
COMPETENCE SATISFACTION When I am at work, I feel competent to achieve my goals.	122	4.19	.856
AUTONOMY FRUSTRATION I feel pressured to do too many things at my job.	122	2.62	1.201
RELATEDNESS SATISFACTION At work, I feel close and connected with other people who are important to me.	122	3.97	.995
COMPETENCE FRUSTRATION I feel insecure about my abilities at my job.	122	1.69	.997
AUTONOMY FRUSTRATION My daily activities at work feel like a chain of obligations.	122	2.37	1.115
AUTONOMY SATISFACTION I feel I have been doing what really interests me in my job.	122	3.76	.988
RELATEDNESS FRUSTRATION I have the impression that people I spend time with at work dislike me.	122	1.92	1.147
COMPETENCE SATISFACTION In my job, I feel I can successfully complete difficult tasks.	122	4.07	.942
RELATEDNESS FRUSTRATION I feel the relationships I have at work are just superficial.	122	2.33	1.153
COMPETENCE FRUSTRATION When I am working I feel like a failure because of the mistakes I make.	122	1.65	.961
RELATEDNESS SATISFACTION I experience a warm feeling with the people I spend time with at work.	122	3.91	1.029
Valid N (listwise)	122		

Table 10 Mean and Standard Deviation of Statements in Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS)

Statements with the highest means are statements reflecting Competence Satisfaction – “At work, I feel capable of what I do” (Mean = 4.40), "I feel confidence that I can do things well on my job." (Mean = 4.32, SD = .836), “"When I am at work I feel competent to achieve my goals." (Mean = 4.19, SD = .856)” and "In my job I feel I can successfully complete difficult tasks." (Mean = 4.07, SD = .942). Additionally, there is a low deviation of scores among the participants in these statements.

On the contrary, the highest means when measuring frustration were found in statements reflecting Autonomy Fustration. “Most of the things I do at my job feel like “I have to.” (Mean = 2.03, SD = 1.060), „I feel forced to do many things at my job that I wouldn’t choose to do.“ (Mean = 2.11, SD = 1.027) and „I feel pressured to do too many things at my job“ (Mean = 2.62, SD = 1.201).

Further analysis will be performed in the following chapter.

6.6. Testing the Hypotheses

At the beginning of the research, four hypotheses have been set.

H1: Intrinsic motivation state prevails among high school teachers in Croatia.

The first hypothesis was set based on the literature review and its two findings – the nature of the teaching profession and the cultural context of the teaching profession in Croatia.

Firstly, the teaching profession is often chosen as an intrinsically motivated decision and is driven by the wish and willingness to contribute to society and individuals by transferring knowledge.

Secondly, the literature showed that the cultural influences on the teaching profession in Croatia are strong and include values and norms. Teachers in Croatia are often motivated by the feeling of duty to contribute to their students' intellect and morale, emphasize the importance of education, and contribute to the country's future.

Therefore, a hypothesis is set that the state of intrinsic motivation prevails among teachers in Split, Croatia.

Testing the Hypothesis H1:

To confirm or reject the hypothesis, the analysis of the individual agreement scores with the motivation states according to the MWMS was performed. As shown in the section Motivation States of the Sample, in the chapter Multidimensional Work Motivation Scale (MWMS), new variables were computed by adding the values of agreement for each statement reflecting each motivation statement. Furthermore, the scores of each participant were analyzed individually to determine the highest agreement score and to determine which motivation state it presented.

The results showed that the highest agreement score was scored in the state of Identified Motivation, with 55 participants showing the highest agreement score in this motivation state. Intrinsic Motivation is in third place, with 14 participants scoring the highest in that motivation state, while 13 participants have an equal score of agreement in the states of Identified Motivation and Intrinsic Motivation.

Therefore, we must **reject the hypothesis H1** that Intrinsic Motivation prevails among the high school teachers in Split, Croatia.

H2: Younger teachers are more intrinsically motivated to work than older ones.

Choosing a teaching career is often a calling motivated by the willingness to help others and impact the next generation of adults, and it is generally motivated by intrinsic factors. Teachers who have recently finished their education might have a stronger enthusiasm than their mature colleagues. Additionally, the literature review showed a cultural shift in Croatian society from the times when identification with the company or organization was more important, to a more self-oriented perspective.

Additionally, many de-motivating factors appear in practice and might affect one's motivation with time, causing burnout or career stagnation. Therefore, I hypothesize that younger teachers are more likely to have a higher level of intrinsic motivation than their older colleagues.

Testing the Hypothesis H2:

To test the hypothesis, new variables were computed, and participants were divided into younger and older categories. Participants aged 26 to 45 were put into the "Younger" group, while participants aged 46 to 65 were put into the "Older" group.

A new variable called "Intrinsic Motivation" was created by adding the values of all the statements in the MWMS relevant to the state of Intrinsic Motivation.

Group Statistics	Age group	N	Mean	Std. Deviation	Std. Error Mean
Intrinsic Motivation	Younger	51	15.9608	3.44651	.48261
	Older	71	15.2535	3.91961	.46517

Table 11 Group Statistics of the Older and Younger Teachers

As we can see from the table above, 51 participants belong to the group "Younger" while 71 participants belong to the group "Older". When it comes to the means of both groups we can see that there is a difference with mean of the Younger group being 15.9608, and of the Older group being 15.2535. However, we can not estimate if that difference is statistically significant. Therefore, an Independent Samples T-Test was conducted to test the hypothesis.

Independent Samples Test		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance		Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p			Lower	Upper
Intrinsic Motivation	Equal variances assumed	1.987	.161	1.033	120	.152	.304	.70726	.68462	-.64824	2.06276
	Equal variances not assumed			1.055	115.100	.147	.294	.70726	.67030	-.62045	2.03498

Table 12 Independent Samples Test for Intrinsic Motivation

We can assume equal variances since Levene's test shows a significance greater than 0.05 and p=0.161.

We are looking at the value of one-sided p and it is p= 0.152. Since the value of p is higher than 0.05, we must **reject the hypothesis H2** that there is a significant difference between the intrinsic motivation of younger and older teachers and that younger teachers are more intrinsically motivated than older teachers. We must confirm the null hypothesis that the groups have no statistically significant difference.

H3: The need for autonomy is the need in which teachers present the highest frustration.

The hypothesis of the need for autonomy being the least satisfied stems from the findings of the literature review and the comprehensive directives provided by Croatia's National Curriculum. Curriculum defines learning objectives, structure of the educational program, expected learning outcomes, the evaluation of the learning process and teachers' qualifications required for a certain position. Additionally, since the role of the principal includes many managerial and administrative tasks, teachers' autonomy can be limited and reduced (Kovač & Staničić, 2019).

Testing the hypothesis H3:

New variables were computed to test the hypothesis. They have been computed by adding all the statements reflecting frustration of the respective needs and new variables were labeled as Autonomy Frustration, Competence Frustration and Relatedness Frustration.

In the BPNSFS, each need frustration is represented by four statements with which participants had an opportunity to express their agreement on a five-level scale, making the highest score of agreement with each need frustration 20, and the lowest 4.

Statistics		Autonomy frustration	Competence frustration	Relatedness frustration
N	Valid	122	122	122
	Missing	0	0	0
Mean		9.13	6.57	7.42
Median		9.00	5.00	6.50
Std. Deviation		3.188	3.037	3.290
Minimum		4	4	4
Maximum		18	17	20

Table 13 Statistics of the Needs Frustration

From the table above, it can be recognized that the difference between means of each need frustration exists. However, a further analysis is conducted to research those differences. Therefore, the Paired Samples T-Test will be conducted.

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Autonomy frustration	9.13	122	3.188	.289
	Competence frustration	6.57	122	3.037	.275
Pair 2	Autonomy frustration	9.13	122	3.188	.289
	Relatedness frustration	7.42	122	3.290	.298

Table 14 Paired Samples Statistics for Needs Frustration

Above table shows us that for the Pair 1 (Autonomy vs. Competence Frustration) the mean frustration score for autonomy (9.13) is higher than the mean frustration score for competence (6.57). Also, according to the standard deviation, autonomy scores have a higher variability (3.188) than the ones in the case of competence (3.037).

For the Pair 2 (Autonomy vs. Relatedness Frustration) the mean frustration score for autonomy (9.13) is also higher than the mean frustration score for relatedness (7.42). Standard deviation for relatedness (3.290) is higher than the one for autonomy (3.188) showing a higher variability between scores.

To check if the mean differences are statistically significant, the Paired Samples T-Test was performed.

Paired Samples Test		Paired Differences					t	df	Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Autonomy frustration - Competence frustration	2.566	3.021	.273	2.024	3.107	9.382	121	<.001	<.001
Pair 2	Autonomy frustration - Relatedness frustration	1.713	3.106	.281	1.156	2.270	6.093	121	<.001	<.001

Table 15 Paired Samples Test of Needs Frustration

After conducting the Paired Samples Test, for the Pair I we can see that the mean difference between autonomy frustration score is higher by 2.566 than the competence frustration score. When it comes to the significance, p-values, both the one-sided and two-sided, are lower than .001indicating that the difference is highly statistically significant.

For the Pair 2 the mean difference between autonomy frustration score and relatedness frustration score is higher for autonomy frustration by 1.713. Both p-values are lower than 0.001, indicating that the difference between means is statistically significant.

Therefore, we can reject the null hypothesis and **confirm the hypothesis H3** that mean frustration score for autonomy is significantly higher than frustration scores for competence and relatedness.

Paired Samples Effect Sizes			Standardizer[a]	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	Autonomy frustration - Competence frustration	Cohen's d	3.021	.849	.641	1.055
		Hedges' correction	3.039	.844	.637	1.049
Pair 2	Autonomy frustration - Relatedness frustration	Cohen's d	3.106	.552	.360	.741
		Hedges' correction	3.125	.548	.358	.737

Table 16 Paired Samples Effect Sizes for Needs Frustration

To determine the strength of the effect, we will be looking at Cohen's d. Commonly, 0.2 is considered small, 0.5 medium, and 0.8 a large effect size. For Pair 1, we can determine that there is a large effect size (0.849) suggesting that teachers are significantly more frustrated with the need for autonomy than the need for competence. In the case of Pair 2, Cohen's d has the value of 0.552 indicating a medium to large effect size, meaning that teachers are moderately to highly frustrated with the need for autonomy than the need for relatedness.

H4: The need for competence is the most satisfied need among teachers.

Teachers in Croatia are educated at the higher education level, which takes place in specialized faculties for five years. Additionally, every teacher must undertake a year-long introduction to the profession under the supervision of the assigned mentor, after which they must pass the licensing exam to become qualified teachers. Even though their formal education ends, teachers are encouraged and obliged to continue their education and professional development. Therefore, skills and knowledge attained during formal education, followed by additional training and learning opportunities, can create a sense of competence in their work.

Therefore, the hypothesis is that the satisfaction of the need for competence among high school teachers in Split, Croatia, is the most satisfied among the three basic psychological needs.

Testing the hypothesis H4:

New variables were computed to test the hypothesis. They have been computed by the addition of all the statements reflecting satisfaction of the respective need and new variables were labeled as Autonomy Satisfaction, Competence Satisfaction and Relatedness Satisfaction. In

the BPNSFS, each need satisfaction is represented by four statements with which participants had an opportunity to express their agreement on a five-level scale, making the highest score of agreement with each need satisfaction 20, and the lowest 4.

Statistics		Autonomy satisfaction	Competence satisfaction	Relatedness satisfacion
N	Valid	122	122	122
	Missing	0	0	0
Mean		15.08	16.98	16.01
Median		15.00	17.00	16.00
Std. Deviation		3.148	2.850	3.233
Minimum		8	8	5
Maximum		20	20	20

Table 17 Statistics for Needs Satisfaction

From the table above, it can be recognized that the difference between means of each need satisfaction exists.

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Competence satisfaction	16.98	122	2.850	.258
	Autonomy satisfaction	15.08	122	3.148	.285
Pair 2	Competence satisfaction	16.98	122	2.850	.258
	Relatedness satisfaction	16.01	122	3.233	.293

Table 18 Paired Samples Statistics for Needs Satisfaction

Above table shows us that for the Pair 1 (Competence vs. Autonomy Satisfaction) the mean satisfaction score for competence (16.98) is higher than the mean satisfaction score for autonomy (15.08). Also, according to the standard deviation, autonomy scores have a higher variability (3.148) than the ones in the case of competence (2.850).

For the Pair 2, the mean satisfaction score for competence (16.98) is slightly higher than the mean satisfaction score for relatedness (16.01). The standard deviation for relatedness satisfaction (3.233) is higher than for competence satisfaction (2.850) showing more variability in the relatedness satisfaction score.

This table shows us that teachers report the highest satisfaction with the need for competence, followed by the need for relatedness and the lowest satisfaction satisfaction with the need for autonomy.

However, to check if that difference is statistically significant, and to test the hypothesis that satisfaction for the need of competence is the highest among participants, the Paired Sample T-Tests was conducted.

Therefore, we are setting a null hypothesis – N0: The mean satisfaction score for competence is not significantly higher than mean satisfaction scores for autonomy and relatedness.

And an alternative hypothesis – H4: The mean satisfaction score for competence is significantly higher than satisfaction scores for autonomy and relatedness.

Paired Samples Test		Paired Differences					t	df	Significance	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				One-Sided p	Two-Sided p
					Lower	Upper				
Pair 1	Competence satisfaction - Autonomy satisfaction	1.893	2.352	.213	1.472	2.315	8.890	121	<.001	<.001
Pair 2	Competence satisfaction - Relatedness satisfaction	.967	3.096	.280	.412	1.522	3.451	121	<.001	<.001

Table 19 Paired Samples Test for Needs Satisfaction

After conducting the Paired Samples Test, for the Pair I we can see that the mean difference between competence satisfaction score is higher by 1.893 than the autonomy satisfaction score. When it comes to the significance, p-values, both the one-sided and two-sided, are lower than .001indicating that the difference is highly statistically significant.

For the Pair 2 the mean difference between competence satisfaction score and relatedness satisfaction score is higher for competence satisfaction by 0.967. Both p-values are lower than 0.001, indicating that the difference between means is statistically significant.

Therefore, we can reject the null hypothesis and **confirm the hypothesis H4** that mean satisfaction score for competence is significantly higher than satisfaction scores for autonomy and relatedness.

Paired Samples Effect Sizes			Standardizer[a]	Point Estimate	95% Confidence Interval	
					Lower	Upper
Pair 1	Competence satisfaction - Autonomy satisfaction	Cohen's d	2.352	.805	.599	1.008
		Hedges' correction	2.367	.800	.596	1.002
Pair 2	Competence satisfaction - Relatedness satisfaction	Cohen's d	3.096	.312	.130	.494
		Hedges' correction	3.115	.310	.129	.490

Table 20 Paired Samples Effect Sizes for Needs Satisfaction

Comparing competence satisfaction and autonomy satisfaction, we can see that Cohen's d has a value .805 indicating a large effect size, suggesting that teachers' need for competence is significantly more satisfied than the need for autonomy. In the case of Pair 2, Cohen's d has the value of 0.312 indicating a small to moderate effect size, meaning that teachers' need for competence is more satisfied than need for relatedness, however that difference is moderate.

7. Discussion and Revision of Research Questions

The research of the presented thesis included a literature review and empirical research as methods to reach the research objectives set at the very beginning of the study.

The main objectives were to describe the context of the Croatian education system and its possible demotivating factors, identify the state of motivation of teachers according to the Self-determination theory, and examine the satisfaction and frustration of the three basic psychological needs: autonomy, competence, and relatedness.

Findings of the Literature Review

The literature review gave us a clearer picture of the structure of the education system and its very clearly defined leadership figures and institutions. The Croatian education system is centralized around the Government and governmental bodies and has a clear structure divided into early education and care, primary education, secondary education, and higher education.

When it comes to the teaching profession in Croatia, while the Croatian society experienced cultural shifts by rejecting the socialist past, the education system and the position of teachers in the society also experienced changes. The teaching profession was more respected in the past and has, in recent years, like in many other Western countries, suffered many obstacles, such as teacher shortages, a not-rewarding salary system, and a lack of public respect for the profession.

However, the Croatian education system is well-structured, with clear guidelines set mainly by The Ministry of Science, Education, and Youth, such as the National Curriculum, textbook approval, and national education standards and regulations.

Teachers' education and professional development are at a high level, with teachers being educated on the higher education level and undergoing a year-long introduction to the profession under the supervision of the assigned mentor. Additionally, professional development is mandatory and highly encouraged within the system.

However, the obstacles in the system are often visible, such as political unwillingness to adopt recommendations from professionals, such as the reform of the role of schools' principals. Furthermore, low public respect for the profession has been recognized, which presents a shift from earlier times. An additional demotivating factor - the not-rewarding salary system, has

been recognized as a significant issue, as Croatia has one of the least rewarding salary progression systems among OECD and partner countries.

The literature review reached the objective of examining and describing the context of the Croatian education system to provide more context to the empirical part of the research.

Findings of the Empirical Research

Many obstacles described in the literature review can induce pessimistic expectations when planning empirical research. However, following the literature review, the empirical research gave interesting and more promising results.

Looking at the motivation states determined by Deci and Ryan in the Self-determination theory, the survey results have shown that among the participants, the highest score of agreement between motivation states is the state of Identified Motivation. Even though Identified Motivation is not considered a state of intrinsic motivation but an extrinsic one, it is essential to remember that it is considered an autonomous motivation in which individuals identify with the value or meaning of the activity and accept it as their own, with 55 out of 122 teachers having the highest agreement score with this state of motivation, a hypothesis that the intrinsic motivation state prevails among participants had to be rejected.

However, it is interesting and encouraging to see that autonomous motivation prevails and that intrinsic motivation is found in third place, with 14 participants having the highest level of agreement with this motivation state. It is essential to mention that 13 participants equally agree with statements reflecting Intrinsic and Identified Motivation. These results show a high level of autonomous motivation and present a more positive picture of high school teachers' motivation.

Regarding the differences between the older and younger teachers, a hypothesis that younger teachers are more intrinsically motivated had to be rejected since there was no statistically significant difference between the two groups. Both groups showed a high mean of agreement with the state of intrinsic motivation.

Regarding the satisfaction and frustration of basic psychological needs – autonomy, competence, and relatedness, data showed high scores of agreements with needs' satisfaction and a reasonably low level of frustration with all the needs.

Teachers have expressed the highest level of satisfaction with the need for competence, and the difference between the need for competence and the other two needs has been proven to be statistically significant. These results can possibly be explained by the extensive education school teachers undertake, as well as the sense of confidence that has been highly scored in the statements reflecting the need for competence.

The frustration of the need for autonomy was scored with the highest agreement score among participants. Even though its frustration is still low, it is still essential to remember that it exists. The participants showed a statistically significant difference between the frustration of the need for autonomy compared to other needs. As we saw in the chapters explaining the structure of the education system in Croatia as well as the leadership style, the educational program is determined by the well-defined curriculum as well as tailored by the government and its bodies, while principals as leaders in the school setting are exercising various roles at the time – managers, administrators, and mentors having much autonomy as their responsibility and possibly limiting the autonomy of teachers.

However, it would be necessary to research further what causes the frustration of teachers' need for autonomy so changes can be implemented to remove these obstacles. It is, however, with all the limitations in mind, encouraging and laudable to see the high satisfaction of basic psychological needs since they represent a focal point of Self-determination theory and the well-being of an individual at the workplace, but also in a broader context.

Conclusion

The thesis studied the context of Croatia's education system, its positive sides, its shortcomings, and the role of teachers within the system. The focus was put on high school teachers and their motivation and satisfaction of basic psychological needs to describe the current state of affairs according to the chosen theoretical framework – Self-determination theory, because of the specificity of the school's work environment and an evident gap in research of the motivation in the public sector in Croatia, more specifically in the education sector.

The findings represent a more positive picture of the situation than initially expected but also highlight some shortcomings, such as political unwillingness to adopt the profession's recommendations flexibly, an unclear role of school principals and their autonomy, consequently causing frustration of teachers' need for autonomy, a non-rewarding salary system and a heavy workload of teachers.

The thesis's findings raise additional research questions and inspire further research, especially in the field of satisfaction and frustration of teachers' basic psychological needs. Further research would provide more detailed information on the national level and help create recommendations and policy changes within the system to support teachers in performing their everyday tasks and to decline the negative trends of teacher shortages.

Literature

1. Almulla, M. (2020). *An investigation of teachers' motivations for entering the teaching profession in Saudi Arabia* (Doctoral dissertation, University of York).
2. Alshmemri, M., Shahwan-Akl, L., & Maude, P. (2017). Herzberg's two-factor theory. *Life Science Journal*, *14*(5), 12-16.
3. Alvarez, R. M., & VanBeselaere, C. (2004). Web-Based Survey. *Encyclopedia of Social Measurement*, 955-962. https://doi.org/10.1016/B0-12-369398-5/00390-X
4. Bektaş, F., Kılınç, A. Ç., & Gümüş, S. (2022). The effects of distributed leadership on teacher professional learning: mediating roles of teacher trust in principal and teacher motivation. *Educational Studies*, *48*(5), 602–624. https://doi.org/10.1080/03055698.2020.1793301
5. Boljat, I. (2020). Motivacija za rad i izgaranje učitelja informatike, tehničke kulture i strukovnih predmeta. *Politehnika*, *4*(2), 7–18. https://doi.org/10.36978/cte.4.2.1
6. Burcar, Ž. (2014). Role of the principal in Croatian education: Manager, leader or administrator. *European Journal of Mental Health*, *9*(1), 87–96. https://doi.org/10.5708/ejmh.9.2014.1.6
7. Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge. https://doi.org/10.4324/9780203029053
8. Deci, E. L., Olafsen, A. H., & Ryan, R. M. (2017). Self-determination theory in work organizations: The state of a science. *Annual Review of Organizational Psychology and Organizational Behavior*, *4*(1), 19–43. https://doi.org/10.1146/annurev-orgpsych-032516-113108
9. Edo, B. L., & Nwosu, I. C. (2018). Working environment and teachers' productivity in secondary schools in Port-Harcourt Metropolis. In *International* (pp. 39-49).
10. Eyal, O., & Roth, G. (2011). Principals' leadership and teachers' motivation: Self-determination theory analysis. *Journal of Educational Administration*, *49*(3), 256–275. https://doi.org/10.1108/09578231111129055
11. Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of Organizational Behavior*, *26*(4), 331–362. https://doi.org/10.1002/job.322
12. Gagné, M., Forest, J., Vansteenkiste, M., Crevier-Braud, L., van den Broeck, A., Aspeli, A. K., Westbye, C. (2015). The Multidimensional Work Motivation Scale: Validation evidence in seven languages and nine countries. *European Journal of Work and Organizational Psychology*, *24*(2), 178–196. https://doi.org/10.1080/1359432X.2013.877892
13. Gemmink, M. M., Fokkens-Bruinsma, M., Pauw, I., & van Veen, K. (2021). How contextual factors influence teachers' pedagogical practices. *Educational Research; a Review for Teachers and All Concerned with Progress in Education*, *63*(4), 396–415. https://doi.org/10.1080/00131881.2021.1983452
14. Gollwitzer, P. (1990). Action phases and mind-sets. In E. T. Higgins, & R. M. Sorrentino (Eds.), *The handbook of motivation and cognition: Foundations of social behavior* (Vol. 2, pp. 53-92). Guilford Press.

15. Han, J., & Yin, H. (2016). Teacher motivation: Definition, research development and implications for teachers. *Cogent Education*, *3*(1), 1217819. https://doi.org/10.1080/2331186x.2016.1217819
16. Heckhausen, H., & Gollwitzer, P. M. (1987). Thought contents and cognitive functioning in motivational versus volitional states of mind. *Motivation and Emotion*, *11*(2), 101–120. https://doi.org/10.1007/bf00992338
17. Janke, S., Nitsche, S., & Dickhäuser, O. (2015). The role of perceived need satisfaction at work for teachers' work-related learning goal orientation. *Teaching and Teacher Education*, *47*, 184–194. https://doi.org/10.1016/j.tate.2015.01.009
18. Jerome, N. (2013). Application of the Maslow's hierarchy of need theory; impacts and implications on organizational culture, human resource and employee's performance. *International journal of business and management invention*, *2*(3), 39-45.
19. Keller, L., Gollwitzer, P. M., & Sheeran, P. (2020). Changing behavior using the model of action phases. In *The Handbook of Behavior Change* (pp. 77–88). Cambridge University Press.
20. Kotherja, O., & Rapti, E. (2015). The importance of motivation in employees' performance in schools. *Journal of Educational and Social Research*. https://doi.org/10.5901/jesr.2015.v5n2p117
21. Kovač, V., & Staničić, S. (2019). Educational Leadership in the Republic of Croatia. In S. Ševkušić, D. Malinić, & J. Teodorović (Eds.), *LEADERSHIP IN EDUCATION, Initiatives and trends in selected European countries* (pp. 61–80). Institute of Education Sciences (IES) ; Hungarian-Netherlands School of Educational Management ; University of Szeged.
22. Lazzarich, M. (2019). Challenges of the teaching profession: Student teacher wiev of the status of teachers in the society and their own engagement with their future profession. *Journal of Education Society and Behavioural Science*, 1–9. https://doi.org/10.9734/jesbs/2019/v29i130098
23. Leithwood, K., & Jantzi, D. (2005). Transformational Leadership. In B. Davies (Ed.), The Essentials of School Leadership (pp. 31-43). SAGE Publications.
24. Lund, L., Bast, L. S., Rubæk, M., & Andersen, S. (2022). Exploring factors associated with smokeless tobacco use among young people: A systematic scoping review. *Drug and Alcohol Dependence*, *240*, 109627. https://doi.org/10.1016/j.drugalcdep.2022.109627
25. OECD (2020), *TALIS 2018 Results (Volume II): Teachers and School Leaders as Valued Professionals*, TALIS, OECD Publishing, Paris, https://doi.org/10.1787/19cf08df-en.
26. OECD (2023). *Education at a Glance 2023: OECD Indicators*, OECD Publishing, Paris, https://doi.org/10.1787/e13bef63-en.
27. Osemeke, M., & Adegboyega, S. (2018). Critical Review and Comparism between Maslow, Herzberg and McClelland's Theory of Needs.

28. Perlman, D. J. (2018). Effective teaching and motivation: Application of self-determination theory. *Journal of Research, Policy & Practice of Teachers and Teacher Education*, *3*(2), 31–37. Retrieved from https://ojs.upsi.edu.my/index.php/JRPPTTE/article/view/171
29. Remijan, K. W. (2014). Improving Teacher Motivation In Secondary Schools with Hybrid Positions. *American Secondary Education*, *42*(3), 30-38. https://doi.org/43694932
30. Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. *Handbook of self-determination research*, *2*(3-33), 36.
31. Serhan, C., Al Achy, E., & Nicolas, E. (2018). Understanding public sector employees' motivation: What makes them inspired? *International Journal of Human Resource Studies*, *8*(1), 249. https://doi.org/10.5296/ijhrs.v8i1.12758
32. Ševkušić, S., Malinić, D., & Teodorović, J. (Eds.). (2019). Educational Leadership in the Republic of Croatia. In *LEADERSHIP IN EDUCATION, Initiatives and trends in selected European countries* (pp. 61–80). Institute of Education Sciences (IES).
33. Shikalepo, E. E. (2020). The role of motivational theories in shaping teacher motivation and performance: A review of related literature. Rsisinternational.org. Retrieved September 14, 2022, from https://www.rsisinternational.org/journals/ijriss/Digital Library/volume-4-issue4/64-76.pd
34. Sindik, J. (2013). Samoinducirana ulančana demotiviranost kod zaposlenika u državnom/javnom i privatnom sektoru. *Ekonomska misao i praksa*, *22*(2), 515-533.
35. Smokrović, E., Francl Žvanut, M., Bajan, A., Radić, R., & Žvanut, B. (2018). Translation and validation of the Croatian version of the Multidimensional Work Motivation Scale. *Management Journal of Contemporary Management Issues*, *23*(1), 193–202. https://doi.org/10.30924/mjcmi/2018.23.1.193
36. Tehseen, S., & Hadi, N. U. (2015). Factors influencing teachers' performance and retention. *Mediterranean journal of social sciences*, *6*(1), 233-244.
37. Tremblay, M. A., Blanchard, C. M., Taylor, S., Pelletier, L. G., & Villeneuve, M. (2009). Work Extrinsic and Intrinsic Motivation Scale: Its value for organizational psychology research. *Canadian Journal of Behavioural Science. Revue Canadienne Des Sciences Du Comportement*, *41*(4), 213–226. https://doi.org/10.1037/a0015167
38. Trépanier, S. G., Peterson, C., Gagné, M., Fernet, C., Levesque-Côté, J., & Howard, J. L. (2023). Revisiting the Multidimensional Work Motivation Scale (MWMS). *European Journal of Work and Organizational Psychology*, *32*(2), 157–172. https://doi.org/10.1080/1359432X.2022.2116315
39. Turner, J.R. (2013). Mean (Average). In: Gellman, M.D., Turner, J.R. (eds) Encyclopedia of Behavioral Medicine. Springer, New York, NY. https://doi.org/10.1007/978-1-4419-1005-9_1035
40. UNESCO (Ed.). (2014). *Education for all global monitoring report: 2013/2014: Teaching and learning: Achieving quality for all*. United Nations Educational Scientific and Cultural.

41. Urhahne, D., & Wijnia, L. (2023). Theories of motivation in education: An integrative framework. *Educational Psychology Review*, *35*(2). https://doi.org/10.1007/s10648-023-09767-9
42. Van der Kaap-Deeder, J., Soenens, B., Ryan, R. M., & Vansteenkiste, M. (2020). *Manual of the Basic Psychological Need Satisfaction and Frustration Scale (BPNSFS)*. Ghent University, Belgium.
43. Vansteenkiste, M., Ryan, R. M., & Soenens, B. (2020). Basic psychological need theory: Advancements, critical themes, and future directions. *Motivation and Emotion*, *44*(1), 1–31. https://doi.org/10.1007/s11031-019-09818-1
44. Vizek Vidović, V., Vlahović Štetić, V., & Rijavec, M. (2003). Motivational Factors in Teachers' Professional Development. Educational Studies, 29(2-3), 195-209.
45. Williams, C. (2007). Research methods. *Journal of Business & Economics Research (JBER)*, *5*(3).

Online Sources

- Croatian Bureau of Statistics (2023). *Prosječna neto plaća za studeni 2023. iznosila 1 208 eura.* Available from: https://dzs.gov.hr/vijesti/prosjecna-neto-placa-za-studeni-2023-iznosila-1-nbsp208-eura/1758 [accessed n.d.]
- European Commission (2013). *Key Data on Teachers and School Leaders in Europe. 2013 Edition.* Available from: https://eurydice.eacea.ec.europa.eu/publications/key-data-teachers-and-school-leaders-europe-2013-edition [accessed
- European Commission (2019). *Education and Training Monitor 2019 Croatia*. Available at: https://education.ec.europa.eu/sites/default/files/document-library-docs/et-monitor-report-2019-croatia_en.pdf [accessed June 13, 2024]
- European Commission (2023). *Eurydice: Croatia.* Available at: https://eurydice.eacea.ec.europa.eu/national-education-systems/croatia/organisation-education-system-and-its-structure [accessed November 11, 2023]
- Narodne Novine (n.d.). *Pravilnik o normi rada nastavnika u srednjoškolskoj ustanovi*. Available from: https://narodne-novine.nn.hr/clanci/sluzbeni/2010_07_94_2630.html [accessed May 23, 2024]
- OECD (2020). *Education GPS.* Available at: https://gpseducation.oecd.org/CountryProfile?plotter=h5&primaryCountry=HRV&threshold=5&topic=TA [accessed October 1, 2023]
- OECD (2020). *TALIS 2018. Insights and Interpretations.* Available at: https://www.oecd.org/en/publications/talis-2018-results-volume-i_1d0bc92a-en.html [accessed November 1, 2023]
- *Theory – selfdeterminationtheory.org*. (n.d.). Available at: https://selfdeterminationtheory.org/theory/ [accessed May 23, 2024]

Appendices

Appendix I – Questionnaire

This questionnaire was created with the aim of researching the motivation of high school teachers in Croatia (in the city of Split) as part of the master's thesis on the topic of "Work Motivation of High School Teachers in Split, Croatia: Self-determination Theory Perspective" of the Public and Social Policy program at the Faculty of Social Sciences, Charles University in Prague.

Please answer the questions honestly and answer all the questions in the questionnaire. The questionnaire is anonymous, and the results are used exclusively for scientific purposes.

If you have any questions, feel free to contact me via e-mail address: vana.cendo@gmail.com

Thank you for your participation and support.

With respect,

Vana Ćendo

GENDER: M/F/other

AGE: 18-25, 26-35, 36-45, 46-55, 56-65, 65 and above

WHAT IS THE HIGHEST LEVEL OF EDUCATION YOU HAVE ATTAINED?

Completed vocational high school lasting three years

Completed vocational high school lasting four years

Completed grammar high school

Completed higher education institution (College)

Completed university education (Undergraduate degree)

Completed Master's/Doctoral degree

HOW LONG HAVE YOU BEEN WORKING AS A TEACHER?

Up to 5 years

6-15 years

16-25 years

More than 25 years

HOW LONG HAVE YOU BEEN WORKING AT YOUR CURRENT PLACE OF EMPLOYMENT?

Up to 2 years

3 to 10 years

11 to 20 years

21 to 25 years

More than 25 years

WHAT IS THE LENGTH OF YOUR CURRENT EMPLOYMENT CONTRACT?

Permanent term

Fixed term (less than a year)

Fixed term (longer than a year)

Other

ARE YOU CURRENTLY WORKING FULL-TIME OR PART-TIME?

Full-time

Part-time

WHAT IS THE SCHOOL PROGRAM OF THE SCHOOL YOU WORK IN?

Grammar school

Vocational school

Art school

MULTIDIMENSIONAL WORK MOTIVATION SCALE (MWMS)

TO WHAT EXTENT ARE THE FOLLOWING PROPOSITIONS REASONS FOR YOU TO MAKE EFFORTS/GET INVOLVED IN YOUR JOB? PLEASE CHOOSE THE NUMBER FROM 1(NOT AT ALL) TO 7 (COMPLETELY/ENTIRELY) THAT BEST STATES YOUR OPINION.

I make efforts/get involved in my job…

1 – Not at all, 2 – Not really, 3 – A little, 4 – Moderate, 5 – Strong , 6 – Very strong, 7 – Completely/entirely

1. Because I risk losing my job if I don't put enough effort in it.
2. Because it makes me proud of myself.
3. To avoid being criticized by others (e.g. supervisor, collegues, family, clients…)
4. Because I have fun doing my job.
5. Because others will reward me financially only if I put enough effort in my job (e.g. employer, supervisor…)
6. Because otherwise I will feel ashamed of myself.
7. Beacuse putting efforts in this job aligns with my personal values.
8. I don't beacuse I really feel that I'm wasting time at work.
9. Because what I do is exciting.
10. I don't knw why I'm doing this job, it's pointless work.

11. Because others will respect me more (e.g. supervisor, collegues, family, clients…)

12. Because I have to prove to myself that I can.

13. Because otherwise I feel bad about myself.

14. I do little because I don't think this work is worth putting efforts.

15. To get others' approval (e.g. supervisor, collegues, family, clients…)

16. Because others offer me greater job security if I put enough effort in my job (e.g. supervisor, collegues, family, clients…)

17. Because I personally consider it important to put efffort in this job)

18. Because the work I do is interesting

19. Because putting efforts in this job has personal significance to me.

BASIC PSYCHOLOGICAL NEED SATISFACTION AND FRUSTRATION SCALE (BPNSFS)

THE FOLLOWING STATEMENTS CONCERN YOUR FEELINGS ABOUT YOUR JOB DURING THE PAST 4 WEEKS. PLEASE INDICATE HOW MUCH YOU AGREE WITH EACH OF THE FOLLOWING STATEMENTS GIVEN YOUR EXPERIENCES ON THIS JOB ON THE SCALE FROM 1 – STRONGLY DISAGREE TO 5 – STRONGLY AGREE.

REMEMBER THAT YOUR SUPERVISOR WILL NEVER KNOW HOW YOU RESPONDED TO THE QUESTIONS. PLEASE USE THE FOLLOWING SCALE IN RESPONDING TO THE ITEMS.

1. At work, I feel a sense of choice and freedom in the things I undertake. 1 2 3 4 5

2. I feel excluded from the group I want to belong to at work. 1 2 3 4 5

3. I feel confident that I can do things well on my job. 1 2 3 4 5

4. I feel that the people I care at work about also care about me. 1 2 3 4 5

5. Most of the things I do on my job feel like “I have to”. 1 2 3 4 5

6. When I am at work, I have serious doubts about whether I can do things well. 1 2 3 4 5

7. I feel that my decisions on my job reflect what I really want. 1 2 3 4 5

8. I feel that people who are important to me at work are cold and distant towards me. 1 2 3 4 5

9. At work, I feel capable at what I do. 1 2 3 4 5

10. I feel forced to do many things on my job I wouldn’t choose to do. 1 2 3 4 5

11. I feel disappointed with my performance in my job. 1 2 3 4 5

12. I feel connected with people who care for me at work, and for whom I care at work. 1 2 3 4 5

13. I feel my choices on my job express who I really am. 1 2 3 4 5
14. When I am at work, I feel competent to achieve my goals. 1 2 3 4 5
15. I feel pressured to do too many things on my job. 1 2 3 4 5
16. At work, I feel close and connected with other people who are important to me. 1 2 3 4 5
17. I feel insecure about my abilities on my job. 1 2 3 4 5
18. My daily activities at work feel like a chain of obligations. 1 2 3 4 5
19. I feel I have been doing what really interests me in my job. 1 2 3 4 5
20. I have the impression that people I spend time with at work dislike me. 1 2 3 4 5
21. In my job, I feel I can successfully complete difficult tasks. 1 2 3 4 5
22. I feel the relationships I have at work are just superficial. 1 2 3 4 5
23. When I am working I feel like a failure because of the mistakes I make. 1 2 3 4 5
24. I experience a warm feeling with the people I spend time with at work. 1 2 3 4 5