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MA Thesis Title: Leading and Managing an IB MYP Ecosystem

## **MA Thesis Title**

### **Leading and Managing an IB MYP Ecosystem**

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## Abstract

This thesis explores the topic of educational leadership of the whole IB MYP ecosystem. Additionally, this research explains the types of leadership required for 21st-century education and necessary skills and IB leadership intelligences for educational leaders. The methods of investigation included thorough inquiry-led research results from many credible primary and secondary sources. The sources used for this paper were critically evaluated and the accuracy of the information was confirmed with corroboration from other sources. In this research, there are several primary sources like for instance, the qualitative interviews with IB MYP and other educational leaders providing their perspective and vision on education, most important strategic goals, and the importance of teamwork. The quantitative information comes from interpretation of several graphs to analyze and compare data regarding the efficiency of each education system, PISA 2018 scores, and ICT implementation till the COVID-19 outbreak was included. Furthermore, in order to get the parents' perspectives of whose children study in different public primary and secondary schools in North Macedonia, another primary source, a survey was conducted that involved seven participants as a focus group. Processing these results helped to obtain a more objective unbiased perspective of the reality of the education system in North Macedonia, and what needs to be changed for the common good of all of our children. The concepts of "growth mindset" and "lifelong learning" are vital for all educational organizations, and are modeled in all IB schools through different PDs and PLCs stimulating the collaborative school culture and effective communication. The main hypothesis of this thesis is that IB MYP education philosophy is crucial for the 21st-century since it focuses on both academics and life skills, and prepares students for the demands of the global labor market and life, therefore leading and managing MYP teams effectively leads to better educational outcomes. This inquiry leads to an in-depth analysis of the MYP ATL and ATT skills (Approaches to Learning and Teaching- pedagogy) and all types of MYP assessments that inform the teaching and all the learning processes. Among the case studies in this research, the most explored and described one is the NOVA IS of Skopje as an international school that was recently IB MYP accredited. Furthermore, this topic includes the meta-analysis and comparison of the education systems of Finland, the USA, and the RNM on several grounds, like for example national curricula and standards, pedagogies-ATT (Approaches to Teaching), ICT implementation in education, grading systems, languages of instruction, foreign language acquisition policy, some important educational reforms of these countries in the 21st century, and PISA 2018 results for accountability. According to the research results of this inquiry, the Finnish education system is closer to the IB educational philosophy and framework, and it is quite interesting that these similarities are what make these systems successful learning environments that focus on the holistic approach of a child, academics and life skills. Additionally, this research topic elaborates on the main concepts and terminology of strategic planning in education, including all the steps of building a strategic plan with mission and vision statements. Furthermore, it analyzes and compares some countries' national goals for education improvements and reforms via their published mission and vision statements as an oath to the stakeholders, and some successful strategic planning case studies in education by identifying the strengths and some weaknesses. Moreover, the importance of this thesis goes beyond just educating readers about the IB MYP operating teams and educational leadership as the primary focus and the first thesis on this topic in the RNM. It also serves as a "call to action and a catalyst for positive change." The outcomes

of this investigative project not only provide suggestions for smart modifications and reforms in the North Macedonian education system but also aim to benefit the collective well-being of all citizens and promote social justice.

**Key words:** *International Baccalaureate (IB), Middle Years Program (MYP), ecosystem, Human Capital (HC), Social Capital (SC), Decisional Capital (DC), Professional Capital (PC), Professional Learning Community (PLC), Right vs. Wrong drivers, IB leadership intelligences, Approaches to Learning (ATL), Approaches to Teaching (ATT), Interdisciplinary Unit (IDU), Individuals and Societies (I&S), instructional coaches, academic criteria, life skills, methodology, growth mindset, lifelong learning, cognition, metacognition, Bloom Taxonomy, inquiry, action, reflection, formative assessment, summative assessment, feedback, evaluation, self-evaluation, monitoring, authorization, accreditation, education system, structure, national curriculum, standards, pedagogy, grading system, Information and Communication Technology (ICT), PISA scores, strategic planning, SWOT analysis, SMART goal, mission and vision statements, stakeholders*

### Абстракт

Оваа теза ја истражува темата за водство на целиот екосистем во Програмата за ниже средно образование во Меѓународната матура (IB MYP). Дополнително, ова истражување ги објаснува видовите на лидерство потребни за образовните раководители во 21 иот век и неопходните вештини и интелигенции што тие треба да ги поседуваат. Методите на истражување вклучуваат информации од многу валидни примарни и секундарни извори. Овие извори беа критички евалуирани и валидноста на податоците беше поткрепена и потврдена со други релевантни извори. Во ова истражување има неколку примарни извори како на пример, квалитативни интервјуа со образовни лидери од училишта што ја следат програмата на Меѓународната матура, како и други образовни лидери од основното, средното и високото образование. Сите тие ја искажуваат својата перспектива и визија за образованието, најбитните стратешки цели, како и важноста на тимската работа. Квантитативните информации потекнуваат од интерпретација на неколку графикони за анализа и споредба на податоците во врска со ефикасноста на образовните системи, резултатите од ПИСА 2018, исто така и имплементацијата на ИКТ до пандемијата КОВИД-2019. Со цел да се добјат перспективите на родителите чии деца учат во државните основни и средни училишта во Северна Македонија, беше спроведена анкета како друг примарен извор во која беа вклучени седум семејства ко фокус група. Обработката на овие резултати помогна да се добие пообјективна и непристрасна перспектива за реалноста на македонскиот образовен систем, како и што треба да се промени за општото добро на сите наши деца. Концептите за развојна насоченост и доживотно учење се од витално значење за сите образовни институции и во тезата се објаснува како тие се моделирани во училиштата кои ја следат Програмата за ниже средно образование во Меѓународната матура, преку професионални обуки и редовни тимски состаноци кои ја стимулираат соработката, позитивната училишна култура и ефективната комуникација. Главната теза на овој научен труд е дека образовната филозофија на Меѓународната матура (во овој случај Програмата за ниже средно образование т.е. од 6то

до 10 то одделение предметна настава) е клучна за образованието во 21иот век бидејќи се фокусира и на академските и на животните вештини и ги подготвува учениците за живот и за светскиот пазар на труд. Затоа, ефикасното водство и менаџирање на тимовите во Меѓународната матура во Програмата за предметна настава на нижето средно образование, води кон подобри резултати. Ова истражување води кон длабинска анализа на вештините за учење и наставните методи и сите видови на оценување во оваа програма кои ја информираат наставата и сите процеси на учење. Меѓу студиите на случај во овој научен труд, најистражено и опишано е меѓународното училиште Нова од Скопје кое неодамна беше акредитирано од Меѓународната матура во предметната настава на нижето средно образование (IB MYP). Понатаму, оваа тема опфаќа мета-анализа и споредба на образовните системи на Финска, САД и РНМ по повеќе основи, како на пример националните наставни програми и стандарди, педагогији-ATL, АТТ (вештини и методи за учење и предавање), имплементација на ИКТ во образованието, системи за оценување, официјални наставни јазици, политика за изучување на странски јазици во задолжителното образование, важни образовни реформи на овие земји во 21иот век и резултатите од ПИСА тестирањето во 2018 година. Според резултатите од овој истражувачки труд, финскиот образовен систем е поблизок до образовната филозофија и рамка на Меѓународната матура и доста интересно е што овие сличности се она што ги прави овие системи успешни средини за учење што се фокусираат во исто време и на академскиот развој и на животните вештини. Дополнително, оваа истражувачка тема ги разработува главните концепти и терминологијата на стратешкото планирање во образованието, вклучувајќи ги сите чекори на изработка на стратешки план со мисија и визија на организациите. Понатаму, оваа теза ги анализира и споредува националните цели на некои земји за подобрување и реформи во образованието преку нивните објавени мисија и визија кои служат како заклетва на организацијата до засегнатите страни. Исто така, истражувањето вклучува и неколку студии на случај како модели за успешно стратешко планирање во образованието со идентификување на силните страни, но и некои слабости. Меѓудругото, важноста на ова теза оди подалеку од само едукација на читателите за оперативните тимови во Програмата за ниже средно образование во Меѓународната матура и образовното лидерство и раководство како примарен фокус и како прва магистерска теза до сега во РНМ на оваа тема. Овој научен труд исто така служи и како повик за активизам во општеството и катализатор за позитивни промени. Резултатите од ова истражување не само што даваат предлози и препораки за паметни модификации и реформи во македонскиот образовен систем, туку имаат и цел да допринесат за колективната благосостојба на сите граѓани во РСМ и да ја промовираат социјалната правда.

### **Клучни зборови**

*Меѓународна матура, Ниже средно образование во Меѓународната матура/-Програма за предметна настава, екосистем, човечки капитал, социјален капитал, капитал за донесување одлуки, професионален капитал, професионална обука, правилни наспроти погрешни двигатели, лидерски интелигенции, Вештини за учење, Вештини за предавање, интердисциплинарна наставна целина, наставни тренери, академски критериуми, животни вештини, metodologija, развојна насоченост, доживотно учење, когниција, метакогниција, Блум таксономија, истражување, акција, осврт, формативно оценување, сумативно оценување, фидбек, оценување, самооценување, следење, овластување, акредитација, образовен систем, структура, национална наставна програма, стандарди,*

*педагогија, систем на оценување, ИКТ (информатичка и комуникациска технологија), ПИСА резултати, стратешко планирање, SWOT анализа, SMART цели - специфични, мерливи, остварливи, реалистични, временски ограничени, мисија и визија*

## Chapter 1: Introduction

The main purpose of this thesis is to contribute to the educational leadership literature in the RNM, Balkan region, and across the globe. Additionally, it provides research-based proposals to the Ministry of Education and Science of the RNM on how to reform the education system wisely and consistently. This research work explores the leading and managing the operating teams of the whole IB MYP ecosystem. Just as the definition of ecosystem in the field of ecology reads “a biological community of interacting organisms and their physical environment” or in general use “a complex network or interconnected system”, MYP ecosystem consists of eight subject departments intertwined together via collaboration and communication toward common strategic goals. It incorporates all the 21st-century skills needed for career success and academic criteria, thus providing 21st-century education focused on the whole balanced child, emphasizing the academic and life skills as equally important. So far the existing literature informs the readers about the structure of IB MYP framework, the subjects, and official guidelines and requirements. Also, the most recent world literature related to IB leadership, focuses on the seven leadership intelligences and skills that all IB leaders must possess in order to lead the complex system of IB MYP teams. My interest to explore and write about this topic developed naturally, it originated from my personal field of interest as a passionate educator and leader in the IB school, and at the same time, my purpose is with the research results to contribute to the transformation of the education system in the RNM. The gap in literature so far is the practical implementation in different environment and culture, how to lead the whole IB MYP ecosystem of different teams towards the strategic goals and further improvements, and how all of that relates to improving learning outcomes of students and invoke positive educational change in other schools and our country, elaborated through exact case studies in the RNM and the Balkan region. Furthermore, this thesis will be the first one with this topic in the RNM and it also relates not just to a certain school’s strategic goals, but also national goals and possible education reforms.

All of the thesis’ chapters are explore the main hypothesis of this MA thesis: *The IB MYP education philosophy is crucial for the 21st-century since it focuses on both academics and life skills, and prepares students for the demands of the global labor market and life, therefore leading and managing MYP teams effectively leads to better educational outcomes.*

At the very beginning, some theoretical background, brief history, and explanation of the IB educational framework and philosophy is provided for the readers to comprehend the whole idea of this way of schooling. It is important to understand that all IB programs strive to produce globally aware individuals who recognize their shared humanity and responsibility for this planet and work to build a better and more peaceful world, no matter of where in the world the IB school is located. IB curriculum framework focuses on concepts rather than content memorization, research, and higher-order thinking skills. The first association of IB is

inquiry-led learning and teaching. Furthermore, it describes the structure and the three divisions of IB system at schools, like PYP, MYP, and DP programs of study. It elaborates the IB MYP section and the MYP teams as departments that work together toward common goals.

Moreover, the leadership is crucial for all organizations, and here in this research, the main focus is leading and managing MYP teams within the complex IB setting, to accomplish the strategic goals and objectives of the school. Each of the eight MYP subject departments, Service as Action, plus the after-school activities program, and CEESA teams, are all part of the MYP ecosystem. What makes a team, team, above all, is respect, trust, collaboration and effective communication. The role of 21st-century educational leaders is demanding and complex due to the fast-changing world. Besides the necessity of all seven IB leadership intelligences for educational leaders, the characteristics of a good leader include empathy, citizenship, balance, and a caring human, the qualities that we want to develop in all educators and students across the globe. Additionally, this thesis describes all the steps of strategic planning in educational organizations that ensures success and better learning outcomes. Planning for education involves not just the leadership, but a wide range of actors in defining its future and mobilizing human and material resources to achieve its objectives. Mission and vision statements should transparently communicate the school's goals and direction, created by the data analysis and inclusive approach of all stakeholders.

All of these findings relate to the one of the sub-hypothesis: *Leading and managing MYP operating/edu teams via democratic leadership is more effective in achieving the strategic goals for improvement.*

This thesis further elaborates on the ATT and ATL in education as crucial inquiry-based methods for 21st-century learners. It explains this shift in pedagogies through concrete examples and case studies so that the readers have better understanding and could practically implement some ideas. All types of MYP assessments are described with provided examples, formative feedback, embedded life skills needed for successful teamwork, certain real-life career connections, and civic components in some of the summative projects as social activism. It refers to criteria-based grading and interdisciplinary projects as a better option and the right direction for the modern education. The external evaluation of the school aka accreditation evaluation process is also an important for the school to self-reflect and set goals for further development. This research work also analyses and compares the education systems in the Republic of North Macedonia, the USA, and Finland on five grounds: education system structure, national curricula and standards, ATT pedagogy with the ICT implementation, language policy, grading systems, and the international educational standards for student learning outcomes for math, reading, and science-PISA 2018 test scores. The purpose of this research is to explore and analyze the strengths and weaknesses in each of these educational systems so that the policy-makers of the educational reforms could apply them in their strategic planning. The findings of this kind of inquiry not just support the



main hypothesis, but could also help the North Macedonian Ministry of Education identify the best and most effective practices which could be implemented when changing and improving the public education system in collaboration with all the educational leaders in the RNM. These research-based results are in alignment with the last two sub-hypotheses: *IB MYP contributes to better learning outcomes and global citizenship; MYP ATT and ATL skills are focused on developing collaboration, communication, and thinking skills through inquiry-led/research-based assignments oftentimes interdisciplinary (real-world skills application-21st-century skills).*

Moreover, not just that all the research results of this thesis Leading and managing an IB MYP Ecosystem confirm the main hypothesis, but also propose some concrete steps as a real-life application, and proposals as recommendations for the Misnistry of Education and Science in the Republic of North Macedonia when reforming and changing for better the education system.

## **Chapter 2: Theoretical framework of IB MYP educational framework and ecosystem**

### **2.1. What is IB (International Baccalaureate) educational framework?**

The International Baccalaureate Organization was established officially in 1968 in Geneva. It started as a pilot program in 12 schools in 12 different countries. It was globally focused and emphasized international mindedness. It emerged in the era of teacher-centered education, passive student participation focused on memorization and content, as a tendency to reform education toward more student-centered interactive learning. It started with the conference of international social studies teachers inspired by the philosophy of John Dewey, A.S. Neill, Jean Piaget, and Jerome Bruner. Later on, in 1968 when IB was officially registered as an organization, educators like Alex Peterson, Robert Leach, John Goormaghtigh, and Kurt Hahn developed the IB Diploma Program for high school students aged 15 to 19, and IB philosophy. The MYP (Middle Years Program) emerged in 1994 to provide alignment and international education to students aged 11 to 16 prior to higher years of DP. The success of the MYP triggered the release of the PYP (Primary Years Program) in 1997 for elementary school students aged 3 to 12. Thus the IB system consists of smaller systems PYP, MYP, and DP, that within themselves operate through many departments and functional teams. IB curriculum framework focuses on concepts rather than content memorization, research, and higher-order thinking skills. The first association of IB is inquiry-led learning and teaching.

## 2.2 What are the MYP (Middle Years Program) operating teams?

The MYP ecosystem consists of 8 subject groups: Language and Literature, Language Acquisition, Individuals and Societies, Mathematics, Sciences, Arts, Physical and Health Education, and Design. The students move through MYP within 5 years, and each year about 50 hours of teaching time per subject group. In each subject, the students apply skills in a variety of research projects, interdisciplinary experience engaging the real world, and service as action in each year. The MYP approaches to learning and teaching are student-centered, inquiry-based, and ignite curiosity in students to explore, discover, and wonder. The MYP assessment is criteria-based, informed by constructive feedback, and growth-oriented. Leading and managing all the departments in MYP is vital for the whole ecosystem to function properly and thrive.

The IBO learning community has expanded across the globe and currently includes 150 countries with materials in 13 languages. All IB programs strive to produce globally aware individuals who recognize their shared humanity and responsibility for this planet and work to build a better and more peaceful world.

## Chapter 3: Leading and Managing MYP Teams

### 3.1 What are the eight MYP subject groups as operating teams of the MYP ecosystem?

To define the MYP ecosystem, the official definition of the noun ecosystem should be considered in both biological and general sense. *The Oxford English Dictionary* defines the noun *ecosystem* as, in ecology, “a biological community of interacting organisms and their physical environment”, and in general use, “a complex network or interconnected system”.

Therefore, the MYP ecosystem could be defined as an educational community of interconnected and interdependent teams operating as a complex system.

The Middle Years Program (MYP) of the International Baccalaureate (IB) educational framework includes eight subjects: (Foreign) Language acquisition, (English) Language and Literature, Individuals and Societies, Interdisciplinary Science, Mathematics, Arts, Physical and Health Education, and (Digital and Product) Design. The four core MYP subjects are ELL, Math, I&S, and IS. I&S is an umbrella of several disciplines related to social science and humanities such as history, geography, and economics as major ones, as also civics, religion, politics, anthropology, sociology, philosophy, and psychology. Interdisciplinary Science includes learning biology, chemistry, and physics through inquiry and lab work. MYP math is the study of numbers, algebra, geometry and trigonometry, statistics and probability. In MYP, math teaching and learning is structured as the standard math level where students obtain the sound knowledge and skills of math objectives and the extended math level in which students learn more math topics and concepts, enriching their math understanding and practice in depth and breadth,

preparing for the DP HL math. STEM is a crucial perspective in MYP education applying combined knowledge and skills of math and science. ELL focuses on these six language skills: speaking, listening, writing, reading, viewing, and presenting. Learning language and different genres of literature is crucial in MYP for all the subjects' inquiries "As MYP students interact with a range of texts, they generate insight into moral, social, economic, political, cultural, and environmental domains. They continually grow in their abilities to form opinions, make decisions, and reason ethically—all key attributes of an IB learner." (International Baccalaureate). Furthermore, IB values local cultures and languages, therefore, learning native/mother tongue is considered one of the major subjects in MYP, for example, Macedonian Language and Literature in addition to compulsory ELL. Each subject group in each year of the MYP must receive at least 50 hours of instruction. In order to offer more flexibility in addressing local requirements and unique student learning needs, students in years 4 and 5 have the choice to take courses from six of the eight subject areas. MYP students are engaged in at least one interdisciplinary unit per year collaboratively planned between two or more subject groups (International Baccalaureate). Additionally, all MYP year 5 students must complete a personal project based on research related to their personal interest and passion where they independently display Approaches To Learning skills, creativity, and academic honesty. The students meet three times with their mentors to discuss their research draft and steps and this project culminates in an MYP PP exhibition of students' final products.

IB education focuses on inquiry-based learning that reflects in all of the MYP subject groups. No matter what the subject is, the philosophy of research within the global contexts with concepts is the same. The MYP global contexts such as identities and relationships, personal and cultural expression, orientations in space and time, scientific and technical innovation, fairness and development, and globalization and sustainability, provide students with common knowledge and understanding of certain world topics in each unit, at an age-appropriate level. On the other hand, concepts are subject-related big ideas that drive the inquiry in each discipline. There are 16 MYP interdisciplinary key concepts and several related concepts per subject that students explore in their learning journey. All of the MYP subjects incorporate ATL skills to scaffold and coach students on how to learn and be responsible for their learning process by becoming independent researchers, communicators, and thinkers.

Furthermore, Service as Action is an integral part of the IB MYP education program in all subjects where students as caring global citizens apply what they learn in the classroom to invoke positive changes in the local community and the world. It is mandatory for all students to have at least one service-as-action project per academic year. MYP educational leaders foster social justice and international mindedness in all classrooms and the community.

### **3.2 What makes the team a great team in the MYP settings?**

Eight operational teams, or eight subject departments, make up the MYP ecosystem. There are also additional MYP teams like counseling, that deal with students' social-emotional learning and development, which is equally important to academics. Another team is the after-school athletic and academic program team, which focuses on enhancing students' sporting activities and academic challenges for further development. All students need to engage in physical activities in order to maintain balanced lives. Together, these teams assist students'

growth and development within the MYP framework and are aligned with the IB Learner Profile. All these MYP teams work together towards their common strategic goals to improve students' learning outcomes and well-being.

But the question is, what makes a team, team? How can team leaders contribute to effectiveness and positive culture in their team?

First of all, effective communication and collaboration are vital 21st-century skills for any career and team and are at the heart of IB inquiry learning. The teams consist of diverse individuals with different backgrounds, knowledge and skills, experience, age, gender, ethnicity, culture, etc. Each school should build a collaborative culture and develop social capital in order to successfully work as a system of effective interconnected teams working together for a common purpose. Additionally, all IB teachers and leaders should model these skills for their colleagues and students on a daily basis and attend professional development workshops that foster lifelong learning, recent trends in education, and sharing ideas in professional discussions and projects that involve teamwork. Good teams develop gradually through common agreements such as their “code of conduct”, shared values, and the team goals that are respected by the leader and all the team members. Research shows that effective teams are built upon trust, and mutual respect, but also competency, organization skills, and integrity of the leader to lead by example. Many good teams develop through informal and formal communication and collaboration over the years.

According to the renowned educational psychologist Dr. Bruce Tuckman, there are five stages of team development (forming, storming, norming, performing, and adjourning) and any team will go through these stages in order to evolve to become high performing. It is important to understand that these stages are fluid, that the storming team could go into norming, but if a new member comes, or a problem occurs, the norming team could go into the storming stage, etc (“Forming, Storming, Norming, and Performing - Tuckman's Model for Nurturing a Team to High Performance”).

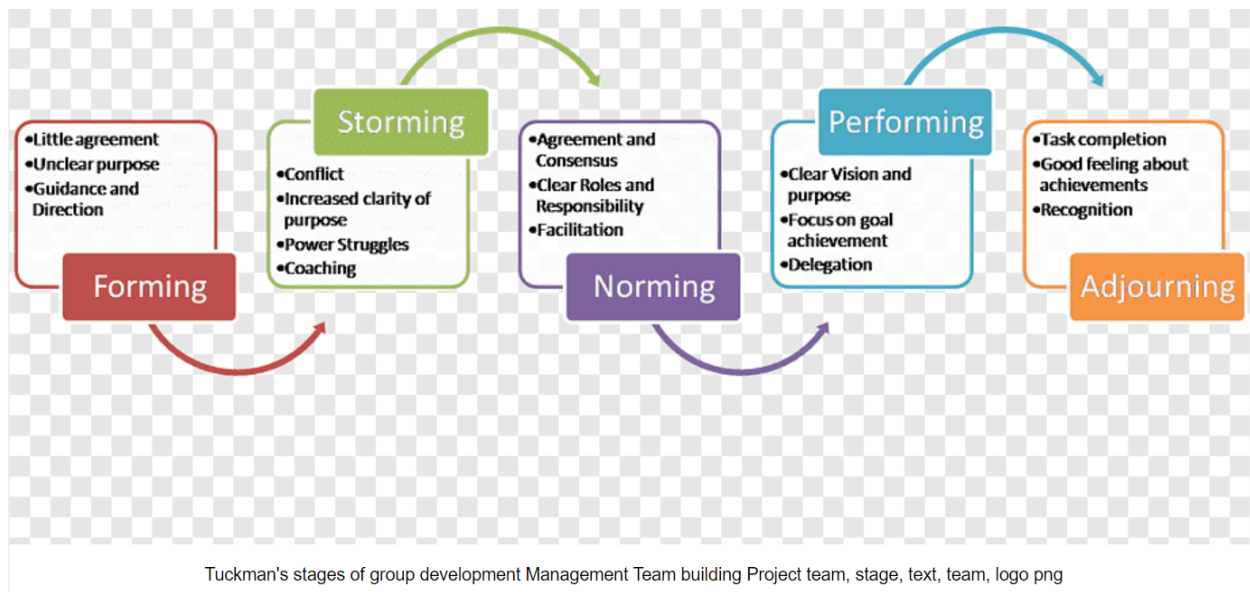
**Figure 1** Tuckman's Five Stages of Team

Image credit: <https://www.pngwing.com/en/free-png-yazkw>

Another scientist, Dr. Meredith Belbin, focuses on the behaviors of each team member at the workplace, identifying both strengths and weaknesses of each individual of the team in order to develop certain team roles. There are nine Belbin Team Roles: Resource Investigator, Teamworker and Coordinator (the Social roles); Plant, Monitor Evaluator and Specialist (the Thinking roles), and Shaper, Implementer and Completer Finisher (the Action or Task roles) (“The Nine Belbin Team Roles”). According to Belbin, a good team comprises team players with different strengths and weaknesses, so the team grows and develops successfully thanks to all the team members' roles just like in any sport teams when used accordingly. Not all positions require the same skills, therefore all nine team roles are important for the team. According to Dr. Belbin, all of these roles are required in order for a team to be successful “A team is not a bunch of people with job titles, but a congregation of individuals, each of whom has a role that is understood by other members.” People with a broader range of abilities are more likely to successfully operate in teams (Belbin 17, 18).

### **3.2.1 What is Professional Capital (PC) and why is it important for effective teams at schools? How do Professional Learning Communities (PLCs) contribute to team efficiency in learning and teaching?**

Professional capital is crucial not just for schools, but for the whole society and the well-being of all citizens. Education is vital for the development of the professional capital in each individual from an early age. Professional capital is a product of human, social, and

decisional capital. Each educator or leader considered as a team member possesses individual human capital like knowledge, skills, EQ, experience, qualifications, etc. On the other hand, social capital comprises collaboration and communication, trust, mutual assistance, collective responsibility, networking, push, pull, nudge, etc. Successful schools develop Professional Learning Communities (PLC) to boost structured collaborative learning and planning. Decisional capital includes decision-making processes in the complex educational environment, judgment, reflection, etc. It empowers the employees to be respected by the community and open to feedback for further development (Hargreaves and Fullan 5).

In order for schools to have a moving, progressive collaborative learning culture, all teachers and leaders should communicate and collaborate on different levels, both formally and informally. It can simply start with sharing anecdotes, ideas for an interesting lesson or project, resources, assistance with technology or any help needed to a higher level of formality i.e. structured collaborative meetings. Moreover, as in each ecosystem, the complex and diverse environment affects the teaching and learning in all schools. The more positive and collaborative the learning culture, the better the success. Collaboration and working in teams still respect individuality and creativity, and each individual is welcome to contribute with ideas and skills for the team to succeed. To conclude, building collaborative culture in schools is crucial like investing in individual human capital since it boosts collaborative social capital and therefore professional capital (Hargreaves and Fullan pp. 112-115).

Professional Learning Communities (PLCs) are an invaluable part of any school's development toward strategic goals and objectives. These teams of teachers and leaders are necessary in any school for improving students' outcomes and ensuring growth in all members. PLC meetings are usually well-structured with a shared agenda and realistic, attainable goals to be discussed and to work upon in a group via a collaborative approach and sharing ideas and best practices. These goals are set based on specific current school data that inform students' performance in all subjects and grade levels. All the members of a certain PLC should agree upon some norms like starting on time, staying on topic, keeping the positive language, showing respect, finishing on time, etc, and developing a collaborative culture within that team and across teams. While the PLCs need formalization and structure, there still must be room for innovations and creative thinking, and the application of new ideas and methods by some individual teachers who later share their findings. PLCs are considered as important professional development for all teachers and leaders in every school where through collaborative approach educators grow and improve students' learning by sharing pedagogical practices, reflecting on action in their classrooms, assessments, unit design, integrating new technology, applying and developing new curriculum, etc. The PLCs could be scheduled for different teams and purposes, for instance, the whole school faculty when implementing a new program or setting strategic goals, MYP teachers to discuss and work on the vertical alignment of the units and ATL skills, assessment moderation for personal projects; subject departments like for example I&S team working on the I&S key and related concepts, history topics alignment, service as action projects; or it could be some

grade level teachers planning IDU and integration with other subjects, etc. According to the objectives of the PLCs, different teachers and educational leaders are leading and facilitating. The PLC time is booked on the master schedule of all IB schools where the structured collaboration, learning, and planning are ongoing the whole academic year. These professional communities could become very formalized and uniformed over time, therefore some aspect of informality and differentiation is recommended for meeting the needs of all the educators, smaller groups, grade levels, subject departments, etc. Some of the PLCs are just social/team building time which is also crucial for team spirit and morale. The best collaboration happens informally over time, by building strong relationships and trust among colleagues and leaders. Oftentimes these PLCs in schools are structured with predetermined agendas and objectives and even pushed in order to have all educators and leaders on the same page. This happens to make sure there is a meaningful collaboration among team members in all teams and among all teams towards common goals.

In conclusion, an effective educational team is one that has trust, shared values and norms, rights and responsibilities, clear roles and expectations, respect, commitment, and ongoing collaboration and communication. No matter in which of the five Tuckman stages the team is currently at (Forming, Storming, Norming, Performing, and Adjourning), collaboration is inevitable for success. Great teams are diverse and consist of individuals that have different personalities and according to Belbin, different Team Roles to play towards achieving the common purpose. Each team member's voice is heard and valued and the strengths of each individual play a crucial role to achieve the team's goals and objectives. Great teams' leadership invests in Professional Capital that includes HC, SC, and DC equally. Building capacity through professional development, strong relationships, lifelong learning, and PLCs are vital for developing and sustaining effective teams. Additionally, team communication and collaboration are important on all levels in one school and across the community as lateral networking among like-minded educators and leaders. It builds partnerships and professional formal and informal alliances. Great educational teams are more successful in achieving better learning outcomes and well-being in students.

### **3.3 How to lead and manage the MYP departments effectively within the MYP ecosystem?**

#### **What is the role of educational leaders in the 21st century?**

First of all, a good educational leader should be the best role model for all the employees of all the values proposed by the school's mission and vision and promote positive school culture and climate. A good leader should be an inclusive democratic reformer who promotes collaboration, communication, and a lifelong learning mindset of staff through training, empowering others via shared leadership (operating teams within a whole system, rather than top-down autocratic style). The ultimate goal should be improving students' learning.

Above all, the educational leader should possess some of the principal human characteristics like honesty, trustworthiness, integrity, empathy, compassion, kindness, respect for others, etc. Additionally, the leader should be an inquirer, researcher, a skillful professional who is interested in all school subjects, communicator, collaborator, organizer/manager, critical and creative thinker, balanced, etc. that aligns with the IB Learner profile and the applied ATL skills. Naturally, the leaders should be respected due to their qualities, credentials, expertise in the educational field, values, and over a decade of experience in the “trenches” in classrooms, rather than based on fear and authority only. Additionally, it is crucial that the educational leaders of the 21st century, in the era of globalization and rapid change, be themselves adaptable and flexible lifelong learners who lead and promote the right change.

Historically speaking, the 2000s educational leadership theory originated in the USA based on societal trends and genomics, the study of the DNA in cells, and the interactions of human beings with the environment. In 2000, President Clinton publicly announced that based on genomics, genetically speaking, all human beings/races have 99.9% similarities. Educational leadership theory rapidly evolved toward equity at the beginning of the 21st century, and the main concerns were the equitable distribution of resources for every student, educational instruction with differentiation of all kinds to meet the needs of every student, the “just right” support needed and when needed so that every child has the chance to succeed and achieve the learning goals, thus fostering inclusion in education (“Theory development in educational leadership.”).

According to this theory, It is the educational leader who is responsible for the inclusion of all students, even the marginalized ones in society, contributing to a more just system and social fairness. Therefore, educational leaders must evoke positive changes, take action to reform schools and education, and role model these shifts in the schools and society to create opportunities for all students following the principles of equality and equity. Leading for change is often necessary to transform education systems towards global trends and social activism.

The 21st-century desired qualities of educational leaders are:

- Democratic
- Transformative
- Relational (collaboration and communication)
- Inclusive
- Committed
- Persistent
- Reflective
- Pedagogical (improving teaching and learning plus social justice oriented)

Furthermore, according to John Maxwell, a best-selling American author, pastor, and speaker who has written many books on leadership, there are five levels of leadership and each leader should be aware of what stage they currently are in and continue to further develop.

Level 1 — Position (the lowest level of leadership, the entry-level leader stage, the position of a leader is given as a promotion, and people follow them because of this leadership position, not an influential leader yet)

Level 2 — Permission (IQ+EQ, empathy, listen-learn-lead, coach who provides peer constructive feedback, respects and values each member of the team, this leader focuses on building an



effective team, relationships, so the team members give them free permission/accept them to lead)

Level 3 — Production (lead by example-visual, the leader boosts team productivity and brings results, excellent time management, organization skills, effective communication, strategic planning-mission and vision, the team members follow them because the leader is the competent one, trustworthy, proven credibility, capable of leading the team towards success-clear common goals)

Level 4 — People Development (at this stage leaders are servant leaders, they mentor, coach, delegate, and multiply-empower other leaders to develop leadership qualities-intelligences, positively influence the life of others, hire smart, recruit well, train people in 5 steps: 1. I do it (the leader learner) 2. I do it and you watch me how I do it 3. You do it and I am with you/coach 4. You can do it independently 5. You do it with someone else to learn-that is how you multiply leaders/not add )

Level 5 — Pinnacle (the peak, the top of the leadership pyramid, culmination, leadership as a lifestyle mentor)

Stage 5 leaders are the rarest type of leaders, but the most wanted ones in the 21st century. They are accomplished leaders with a lasting legacy, got the position well-deserved, empowered other leaders to lead and coach others, positively changed the lives of the employees, and led their organizations to change the world for the better. These leaders have followers because of respect-who they are, what they've done, and what they represent to people. They are growth mindset leaders, lifelong learners, and reflective leaders ("The Five Levels of Leadership.").

It is important to understand that leaders often are different level-leaders with different people, depending on the needs of the individual team members. In Maxwell's own words, "A leader is one who knows the way, goes the way, and shows the way."

In addition, according to Michael Fullan, the only way the vast majority of students will be motivated for learning is to be engaged with the real complex world they live in, with all the obstacles and challenges rather than in an isolated bubble. Educational leaders and teachers should be learners who work together to design units to engage the real world in learning through inquiry that leads to discovery and innovation. Engaging the complicated world in students' learning will stimulate their desire and action toward changing the present world for the better. Ergo, the changing of the world should come as a natural result of learning ("Taking the Drivers on the Road: Reflections 10 Months into the Journey.").

Overall, in his article "Taking the Drivers on the Road" (December 2021) Fullan revises and claims the need of strengthening the Right Four Drivers (policies) into the integrated post-Covid educational model, Human vs Bloodless Paradigm (see figure below). The interconnectedness and the integrated model of both paradigms would be the right approach in education. Fullan emphasizes the importance of the Right Drivers for post-Covid education as something crucial for improving the current learning processes and outcomes.

**Figure 2:** *Fullan's Driver Core Model, Combined Paradigms*

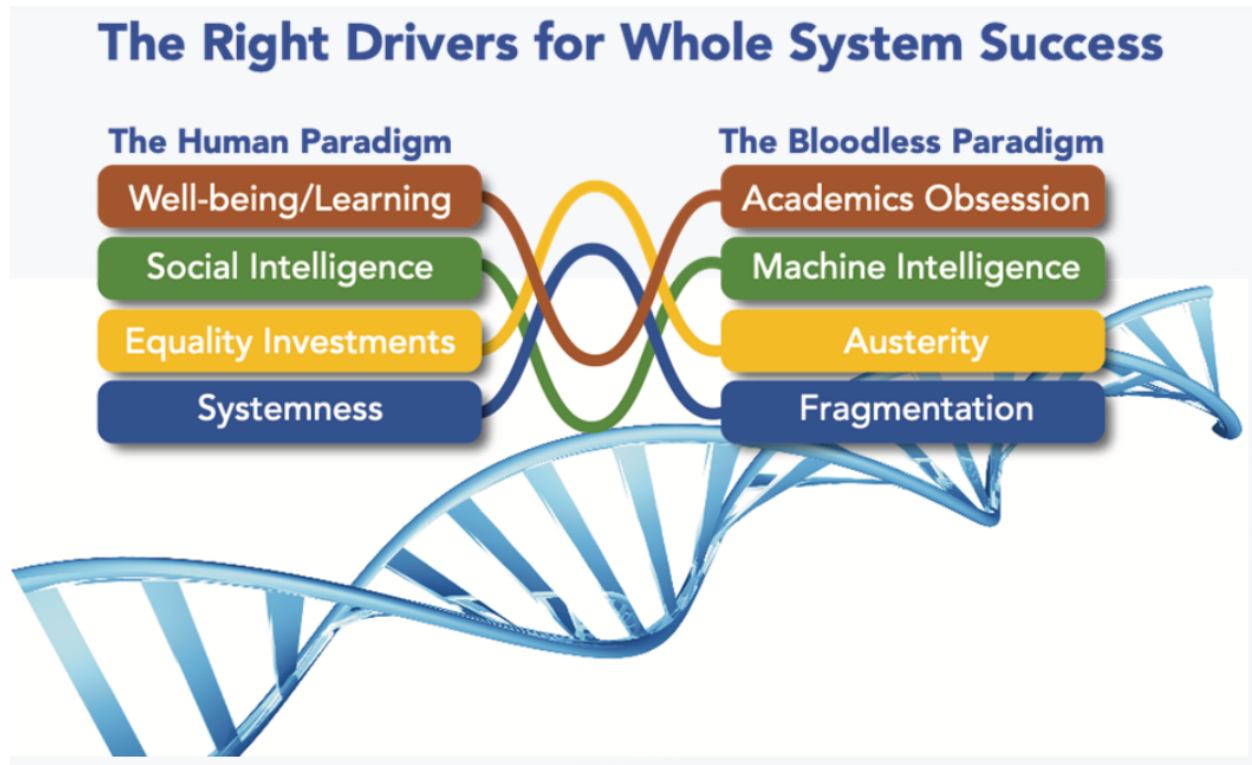


Image credit:

<https://northernalliance.scot/2021/12/taking-the-drivers-on-the-road-reflections-10-months-into-the-journey/>

Fullan proposes the following integrated approach for all four drivers/policies (right + wrong):

- **Driver 1: Learning-Well-Being/Academics.** The focus should be shifted toward Well-Being that impacts SEL (social-emotional learning) besides the Academic Learning itself, so education targets the whole child, and cognitive and life skills must be combined.
- **Driver 2: Social-Machine Intelligence.** There must be a balance of “machines” i.e. technology usage and social skills. Social intelligence which includes human interactions has not been improved since the 1960s. Therefore, focusing on social skills in post-Covid education is vital.
- **Driver 3: Equality Investments-Austerity.** Money should be invested in improving the whole society in regard to education, healthcare, food, water, shelter, equity, and equality. By dedicating funds to equity and equality, the whole society will prosper (unfortunately this is still an issue in a rich country like the USA, they can learn from Finland and other Nordic systems whose societies are closer to socialism).
- **Driver 4: Systemness-Fragmentation.** It is clear that each education organization cannot expect everything from the top (of course policy-making, new programs/curricula, standards, and investments, but will never cause the whole education system to improve) Within the education system, many operating teams of people across the three levels (local, middle, and top) work together toward common goals of improving learning and

well-being. Systemness happens at all levels with people communicating and collaborating on horizontal and vertical connections to align toward their common goals.

Furthermore, 21st-century educational leaders need to be aware of the global job demands since the education system should prepare students for future careers and real-life situations. According to Tony Wagner, an eminent education specialist from the USA, leaders should lead educational organizations where all employers including students are developing cultures of innovation based on collaboration, interdisciplinary problem-solving, and intrinsic motivation. This world needs more innovators for growing and competitive economies, so education and parenting should develop this quality and passion in youth. (“Creating Innovators: A Lecture by Tony Wagner.”). Wagner conducted thorough research and interviewed different corporate business leaders and employers from Apple, Dell, Unilever, university professors, even US Army leaders to identify the competencies needed for employees and the existing gaps in these skills in students when graduating from US high schools. In his book *The Global Achievement Gap*, he argues that 21st-century education should not be focused on content memorization, test prepping, or knowledge required on standardized tests. He claims that students need certain skills and refers to these as the seven competencies or survival skills required for 21st-century citizenship (“Change Talkship: Transforming Education for the 21st Century.”).

1. Critical Thinking and Problem Solving, asking good inquiry questions and thinking
2. Collaboration across networks and leading by influence, not authority
3. Agility and adaptability to change
4. Initiative and entrepreneurialism
5. Effective Oral and Written Communication with thinking, voice, own perspective and passion
6. Accessing and Analyzing information, research and using technology
7. Curiosity and Imagination, creativity and empathy

### Conclusion

To conclude, the role of 21st-century educational leaders is demanding and complex due to the fast-changing world. The characteristics of a good leader as a competent collaborator and communicator, inquirer, thinker, researcher, caring human, etc are qualities that we want to develop in all educators and students across the globe. The theory of educational leadership suggests that 21st-century leaders are democratic and transformational, the ones that lead by example through shared leadership and empowering others. Maxwell’s leadership pyramid explains how leaders should evolve and grow together with their teams toward the pinnacle. Furthermore, Fullan’s concept of a leader as a learner is vital for all educational organizations since leaders are the ones to promote lifelong learning, transformation, and change. Leaders

should use the integrated approach to right and wrong drivers in order to improve learning outcomes and well-being. According to Wagner, all educational leaders should work hard to transform schools and education systems toward closing the current Global Achievement Gap focusing on inquiry teaching and learning that embeds these seven core competencies. Education systems should produce creative problem solvers and should focus on engaging students in passion projects, collaborative teamwork, interdisciplinary inquiries, etc. According to Wagner, the world needs innovators for positive changes and sustainable economies and instead of preparing all children for college, to rethink this as preparing all students for innovation ready. It is obvious that all these researchers propose leaders to lead smart educational reforms, engaging the real world in learning through inquiry, collaboration, and communication, focusing on developing skills that matter the most for 21st-century citizenship, well-being, and the demands on the global labor market.

### **3.3.1 Why are the Seven IB Leaders' Intelligences important for MYP leaders?**

Since all IB schools are complex and diverse ecosystems, educational leaders should be the role model for the teams of educators and all students. The IB MYP leaders should be cultivating collaborative cultures of growth mindset for collective goals, building the school's capacity, fostering innovation, modeling learning themselves, and inspiring and encouraging lifelong learning in all educators and administrators. Building effective collaborative teams is the key to successfully leading the system toward 21st-century demands and coherence (Fullan and Quinn 75). Research suggests that investing in educational leadership besides teachers, is the second-most important variable that affects student achievement in schools. Good leaders impact positively the whole community and lead by example towards improvements. Fullan's concept of principals as learners or "lead learners" in schools, emphasizes the importance of educational leaders as instructional coaches who focus on "orchestrating the work of coaches, teacher-leaders, and central office personnel to support student learning" thus reinforcing the collaborative culture and growth mindset (Fullan and Quinn 56). Considering the leaders in MYP ecosystem, logically, all IB leaders should model the IB Learner Profile and commit to the IB mission. The IB community of 4500 schools in more than 135 countries has worked on developing leaders competent for the complex IB context by offering a PD program that is based on both educational and business leadership research. The most recent IB Category 3 leadership professional development focuses on developing the Seven IB Intelligences in leaders:

1. Strategic – The ability to develop, lead and manage school teams strategically toward school goals, fosters the PLCs
2. Relational – The ability to nurture relationships and build community, to build trust and supportive climate among all stakeholders, social capital, and collaborative teams

3. Cultural – To understand, navigate and engage within and across cultures within the context in which they work, the complex international environment, to respect and celebrate cultural diversity
4. Entrepreneurial – The ability to innovate, bring about change and creatively solve problems, to communicate and promote new ideas and trends during the PLC time
5. Reflective – The ability to be self-aware and to critically reflect, thinking process
6. Pedagogical – To lead and manage effective inquiry-based learning and teaching aligned with the IB philosophy, leader as a capable coach who understands the curriculum and applies and models the ATT and ATL skills, leads and shares during PLCs
7. Heuristic – The ability to make sensible decisions under pressure in complex situations and environments, this relates to decisional capital, decision-making as a mental shortcut based on previous knowledge, experience, and even intuition (Calnin et al. 105-112).

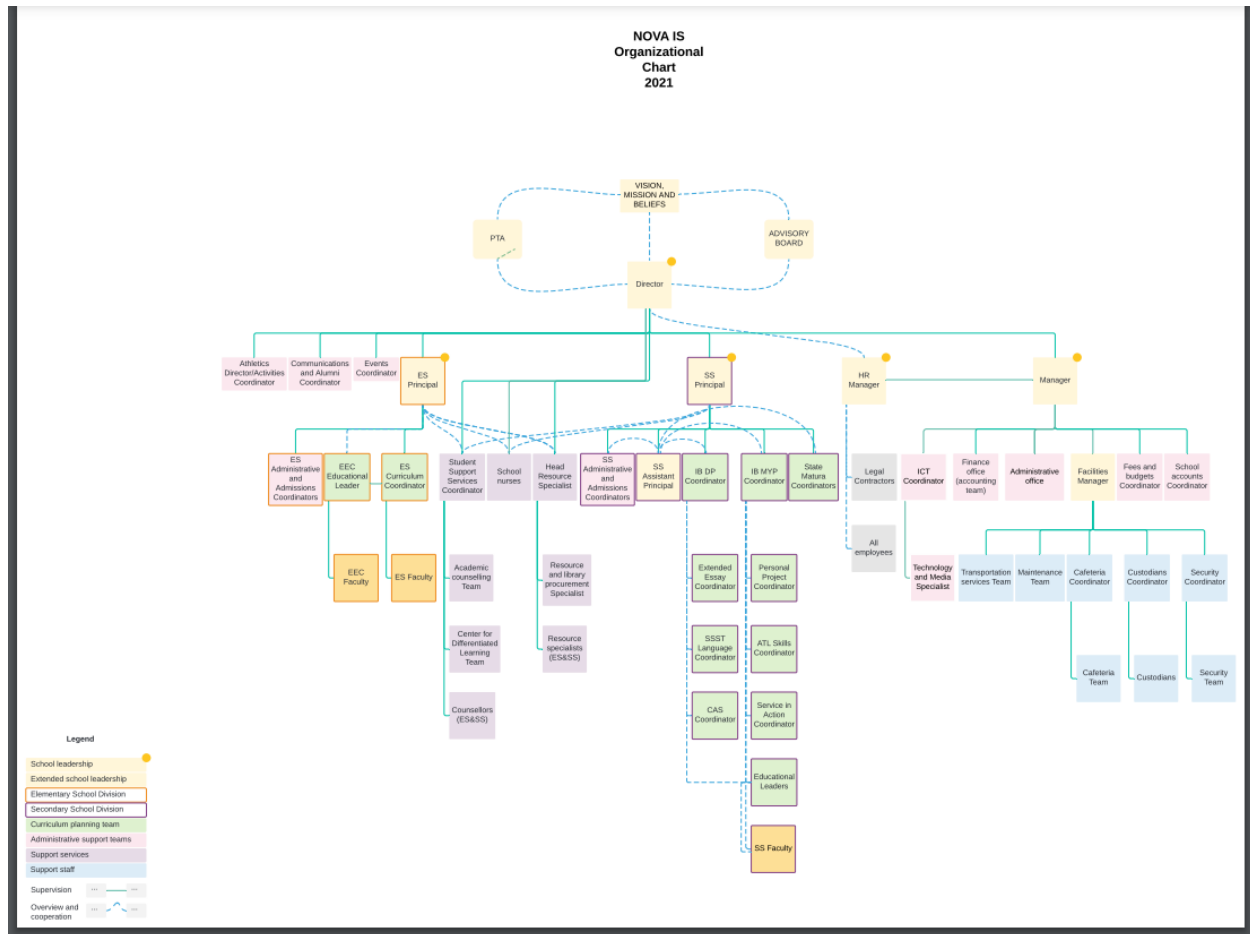
Each MYP educational leader naturally utilizes two to three of these so-called intelligences but the IB professional development that fosters the development of all of the seven intelligences in IB leaders is vital because of the complexity of the whole international setting these leaders lead and the fast-changing global trends in education and career market. Furthermore, these Seven IB Leaders' Intelligences overlap with the Theory of educational leadership qualities of 21st-century leaders who are lifelong learners and lead to change in the education system and the proposals of the eminent researchers in the education leadership field like Fullan, Wagner, and Maxwell. Additionally, these democratic leaders strive to close the global educational gap by reinforcing ATL skills with rigorous academic expectations engaging the real life in education, thus learning has a meaningful and positive impact on the whole community and our planet.

### **3.4 A Case Study: Leading and Managing MYP Teams at Nova IS, Skopje**

Nova International School of Skopje is one of the regional leaders in implementing the full IB curriculum (PYP, MYP, and DP) for all students aged 3 through 18. The MYP accreditation in 2022 triggered the most recent PYP authorization so that the school aligned the complete IB curriculum for all students graduating from NOVA IS. The MYP ecosystem in this school functions as one big team itself within the bigger IB system. The eight subject groups function as teams led by dedicated educational leaders in constant communication and collaboration with the MYP Curriculum Coordinator, Secondary School Principal, Counselor, and with the teams and individuals across the whole MYP setting. The recent 2022 MYP accreditation was the common strategic goal for NOVA IS and therefore all MYP teams starting from 2021, worked together toward this common goal. During that year, the implementation of the MYP curriculum was crucial for all subject groups. Each subject department worked as a team with their own agenda,

but most of the time similar topics related to MYP curriculum and the accreditation were on all teams' agendas. For instance, the I&S team leader communicated with the team all the important topics regarding the unit design, vertical alignment of the topics in all grade levels, key and related concepts, the progression of the ATL skills, designing inquiry-based assessments, IDU, service-as-action projects, TSC rubrics for each summative assessment and constructive feedback, assessment moderation, etc. The I&S educational leader made sure all the documents with each team member contribution are ready for the upcoming accreditation. During this process, the leader and all the team members were supportive, dedicated, and willing to learn and apply the novelties that MYP curriculum brings. The leader incorporated relational, strategic, pedagogical, and reflective intelligences to lead the team and via collaboration and communication they manage to accomplish the objectives successfully on time. Simultaneously, all MYP teachers and leaders participated in the IB professional development workshops related to MYP and their subject group which was a positive way to build capacity in the school. In Nova IS, each Wednesday, the PLC time is scheduled for all educators and leaders organized according to the school's objectives and goals. Biweekly, each subject department meets to discuss and share ideas on designated topics accordingly. Once a month, all educational leaders meet with the SS principal and the MYP CC to discuss certain topics and how to further support the teams towards a common goal. The whole MYP ecosystem in Nova IS is a network of interconnected teams within the whole IB system.

**Figure 3** *The IB Ecosystem Network of Nova IS, Skopje*



*Chart credit: MYP CC at Nova IS*

I have recently conducted four qualitative interviews at NOVA IS, with the MYP Curriculum Coordinator, the MYP Counselor, the MYP Math Educational Leader, and the Athletics Director in order to get their perspective on what effective teams are, qualities of a good leadership, and their MYP teams' goals.

### Interview 1

The Participant in Interview 1 is the MYPCC at Nova IS with 22-year experience in international education of which the last 8 years in MYP. According to her, trust and respect make a team function and those are earned over time. It is important that each member of the team plays to their strengths. She believes that one mistake teams often make is having the expectation that the work each person does is the same, but on the contrary, each team member should rely on what each team member does the best. That might mean that the majority of the unit planning and assessment writing falls to one member, but another teammate may be better at

dealing with difficult colleagues that the team has to collaborate with. In a well functioning team, no one “counts” what the other does. Furthermore, this participant explains that ideally all IB schools should be led with transformational leadership. This combines the best of all the leadership styles and aligns with the IB learner profile. However, that is a tall order and rarely achievable. She believes that creating a shared vision that is the driving force for an organization where everyone’s emotional and financial needs are met is pretty difficult in reality. But striving for that is the ultimate goal. According to the MYPCC, Nova is currently primarily a transactional leadership. To move beyond the quid-pro-quo aspect of leadership the school would need to spend more time developing capacity in teachers, investing in emotional well-being, and develop the leadership team through workshops and professional learning. Furthermore she explains that next year, MYP teachers at Nova IS will have common planning time every day of the week but Wednesday (all PLCs on Wednesday). The expectation will be to have weekly check-ins or formal meetings whenever a subject is shared. Teachers will also be expected to moderate all summative assessments as a team so the school plans for more collaborative time for all educators and leaders. On the question about the three most essential qualities of a good leader, the participant values consistency, compassion, and a sense of humor the most. According to her, leaders have to have consistent and predictable reactions and they also have to follow through on the things they say they will do. Leaders need to show compassion when hard decisions have to be made understanding the human impact. Also, leaders need to have a sense of humor since “life is ridiculous and sometimes the only thing you can do is laugh at it.” Furthermore, the MYPCC explains that the most important goal for Nova IS towards IB accreditation was to formalize the written curriculum. This allowed the school to begin the process of aligning the curriculum (PYP, MYP, DP) and making it better for all students. Based on the IB’s recommendations after the MYP accreditation, Nova IS needs to focus on assessment as a priority goal for the next academic year. The MYPCC claims that there is no consistent application of the criteria yet and a consistent understanding of what the levels mean and how to assess. Obviously, assessment would be a 2024 goal for all MYP teams at Nova IS and that will align with the upcoming MSA re-accreditation. This is a big picture assessment, how educators and leaders use the data they gather to make decisions about resources, curriculum and staffing i.e. to use the assessment data to drive the budget and the professional development agenda.

## Interview 2

The participant in this second qualitative interview is the MYP Counselor at Nova IS, Skopje. The main role of the counselor is to provide social-emotional support to the MYP students, teachers, and families. He believes that social-emotional struggles can get in the way of learning, so his role is to develop preventative content and systems to help students' well-being and respond when things get difficult for a particular student. In his opinion, social-emotional skills are more important than anything else and affect academic success. Students with social-emotional competence handle life's challenges more effectively, and they're more empathetic with others. SE competency helps make a school community a better place.

A great team, according to this participant, have shared vision, clear agreements, clear responsibilities, and accountability. He prefers teams where the team members get along with each other and the top two qualities he values in a team leader are purposefulness and



organization skills. The MYP Counselor believes that the best leadership style for the school is fair, open-minded, purposeful, organized, and visible to the school community. The number one goal for the upcoming school year will be to help teachers integrate SEL practices and opportunities into their classrooms (advisory and subjects). This can take the form of building solid relationships with their students, having consistent routines, and helping students reflect on their own social and emotional growth.

### Interview 3

The participant in the third qualitative interview is the Athletics Director at Nova IS. After-school activities including CEESA events are an integral part of IB Learner profile. CEESA stands for Central and Eastern European Schools Association. It is an organization that brings together international schools located in Central and Eastern Europe. CEESA offers a variety of activities and events for its member schools, including sports and academic competitions. The role of the Athletics Director at Nova IS is to promote and support the development of physical education and sports activities among students. One of his primary responsibilities is to coordinate and organize a wide range of athletic events and competitions, including CEESA, both within the school and with other schools. This includes scheduling practices, games, and tournaments, as well as ensuring that the necessary facilities, equipment, and resources are available for the students to participate in these activities. The athletics program and CEESA (Central and Eastern European Schools Association) tournaments offer numerous benefits to the students of Nova IS. Here are some of the key advantages: physical fitness, skill development, teamwork, sportsmanship, academic enrichment, cultural exchange, leadership opportunities, and overall personal growth. These experiences contribute to their well-being, character development, and academic success.

According to this participant, a good team is characterized by clear goals, effective communication, trust, collaboration, adaptability, continuous learning, and an appreciation of diversity. The three most important qualities of a team leader, according to him, are: effective communication, emotional intelligence, and strong decision-making. He believes that the best fit of leadership for Nova IS will be the one that corresponds with the four IB leadership characteristics of Visionary Leadership, Collaborative Approach, Instructional Leadership, and Culturally Responsive Leadership. In his perspective, the leadership of Nova IS is focused and determined to achieve excellence as an IB and MYP school, with clear goals and targets.

Furthermore, the Athletics Director describes the goals in the academic year of 2024, with the MSA re-accreditation process at Nova IS. The priorities for the Athletics program are aligned with both the MSA accreditation process and the IB Learner Profile. These priorities may include:

1. Inclusivity and Diversity since the Athletics program should promote a culture of respect, fairness, and equity, where every student feels welcome and valued.

2. **Balanced Participation:** The program should promote a balance between academics and athletics, recognizing that both are integral parts of a well-rounded education.
3. **Character Development:** Similar to the IB Learner Profile, the Athletics program can focus on fostering the development of positive character traits such as integrity, perseverance, and respect for others. It can provide opportunities for students to demonstrate these qualities through fair play, good sportsmanship, and ethical behavior.
4. **Personal Growth and Well-being:** The program should emphasize the importance of physical fitness, mental health, and overall wellness. It can promote healthy habits, stress management techniques, and a supportive environment that values the well-being of student-athletes.

#### Interview 4

In this interview, the participant is the MYP Math Educational Leader (EL)/Department Head at Nova IS. According to him, educational leadership is a very important and responsible role. The EL deals with a significant number of teachers and classes of students that have to be aligned and coordinated. Both vertical and horizontal alignment are crucial for success, and the best fit leadership, in his opinion, is the one that is experienced, full of understanding, and knowledgeable of the MYP curriculum. The leaders should possess the three most important qualities such as empathy, resilience, and patience when working with teachers and students.. Furthermore, the participant describes the current MYP Math team at Nova IS as dedicated, overwhelmed, and creative. According to this educational leader, great teams have developed the feeling of mutual trust and comradery. As for the Math department's goals for the next academic year related to the IB MYP accreditation and the MSA re-accreditation (2023/24), the MYP Math team will continue working on vertical and horizontal alignment, revising the MYP unit planners, participating in additional MYP related PDs, and officializing common prep time weekly.

#### Conclusion

In conclusion, the MYP ecosystem in Nova IS is a complex system of diverse teams that operate together toward common goals. Besides the eight MYP subject teams, there are other teams like after-school Athletics and CEESA, Counseling, Service as Action, etc that all work together toward better students' academic outcomes and well-being. The team leaders lead the teams by applying different strategies and IB leadership intelligences in order to achieve certain objectives. Most importantly, all MYP leaders at Nova IS value the mutual trust, effective communication and collaboration, respect, clear goals, and inclusion for all teams to succeed. MYP teams are diverse and the leaders should be aware of each individuals' culture and also strengths and weaknesses. All MYP teams in Nova IS are developing collaborative culture with shared norms and values, and each member is a regular participant of PLCs and different professional development workshops. These operating teams are intertwined and interconnected

in a network driven by common strategic goals. MYP educational leaders are learners, communicators, collaborators, empaths, but also knowledgeable and skillful professionals who lead by example. Since the leadership at Nova IS is still reforming and growing, the next step will be more investment in the Professional Capital that involves HC, SC, and DC that fosters professionalism, inclusion, positive and collaborative culture, sustainability, and growth mindset of all employees.. Additionally, empowering teachers leaders and instructional coaches is one more progressive step for this school for further development in shared leadership.

## **Chapter 4: Approaches to Learning and Assessments in IB MYP Education**

### **A Case Study: Nova IS, MYP I&S Year**

## Introduction

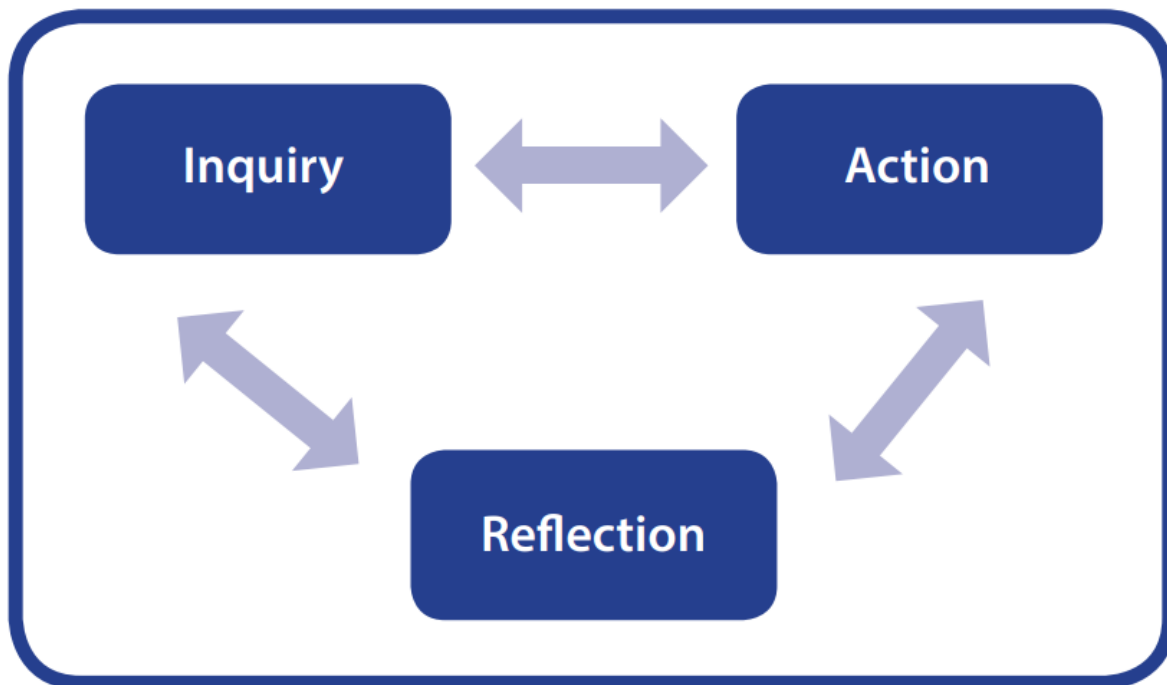
Learning is a part of human evolution. Humans have been learning by doing things in practice for over two million years. Both cognitive and metacognitive learning strategies are vital for human development, learning, and existence. Memory, learning, problem-solving, evaluation, reasoning, and decision-making are just a few examples of the daily mental activities and abilities that make up cognition. Through mental processes, cognition facilitates the creation of new knowledge and aids in the practical application of existing knowledge. On the other hand, metacognition operates with reflective “thinking about thinking”, focusing on oneself and awareness of “what you know/don’t know yet”. Metacognition allows learners to complete a given task “awaken”, and plan it well through reflection, action, monitoring, and evaluation to set further SMART goals for growth. Both are vital for finding the most effective teaching and learning methods. The aims of this research are to analyze and explain the Approaches to Learning in IB (MYP) education setting. The ATL skills allow students to become critical, creative, and reflective thinkers that engage the real world in the learning process. Eventually, they become caring global citizens who are willing to change the world for the better. The information in this research comes from credible educational and governmental sources, including the most recent data from published statistics and primary data from a case study from Nova IS, Skopje, Individuals and Societies Department, Unit 1, Year 2. The findings of these inquiries have real-life applications and can serve as a proposal for the Ministry of Education of North Macedonia to plan and implement positive changes in the education system by embedding the ATL and ATT skills together with the academic skills in the national curriculum of all subjects for better learning outcomes and empower our youth with the 21st-century skill set to be competitive on the global labor market and responsible global citizens.

#### 4.1 What are the ATL skills and why are they important?

The IB curriculum honors the various ways that human beings collaborate and communicate to create meaning and make sense of the world through inquiry and research to find the answers. This learning and teaching occurs in democratic classrooms through the interaction of asking, doing, and thinking (IB Learning Triangle). An IB education equips students for a lifetime of learning via the triangle of inquiry, action, and reflection. All of this is possible with the implementation of the ATL (Approaches to Learning) skills.

Figure 4

*IB Learning Triangle*



*Image credit: <https://ibo.org/>*

Approaches To Learning skills are tools for learning in a school setting, but they transfer in real life. Not just students, but adults need these important life skills in order to be successful in their careers, and also improve their quality of life, and well-being. Through the 21st-century educational process, developing Approaches to Learning skills becomes more crucial than ever. Students need to be given the tools and abilities

necessary to be reflective, caring, open-minded, balanced, principled, and knowledgeable thinkers, communicators, risk-takers, and inquirers (IB Profile). Both cognitive and metacognitive learning strategies are necessary for all of this to happen. Approaches to Learning Skills (ATL) are crucial for the learning process of students since those are all the methods of how students learn, in addition, Approaches to Teaching (ATT) correlate with the ATL skills. They are both inseparable and the most recent umbrella term is ATLT (Approaches to Learning and Teaching). There are five major clusters of ATL skills: Self-Management, Social Skills, Communication Skills, Thinking Skills, and Research Skills that branch out into several indicators per the main cluster (detailed ATL table here: [ATL Skills with Indicators](#)). The selection of ATL skill(s) for the particular task must include the relevant indicators for the academic assignment. All these ATL skills are aligned with the IB Learner Profile in accordance with the IB philosophy of education.

Figure 5 *ATL skills with IB Learner Profile with the common goal of Learning Agility*

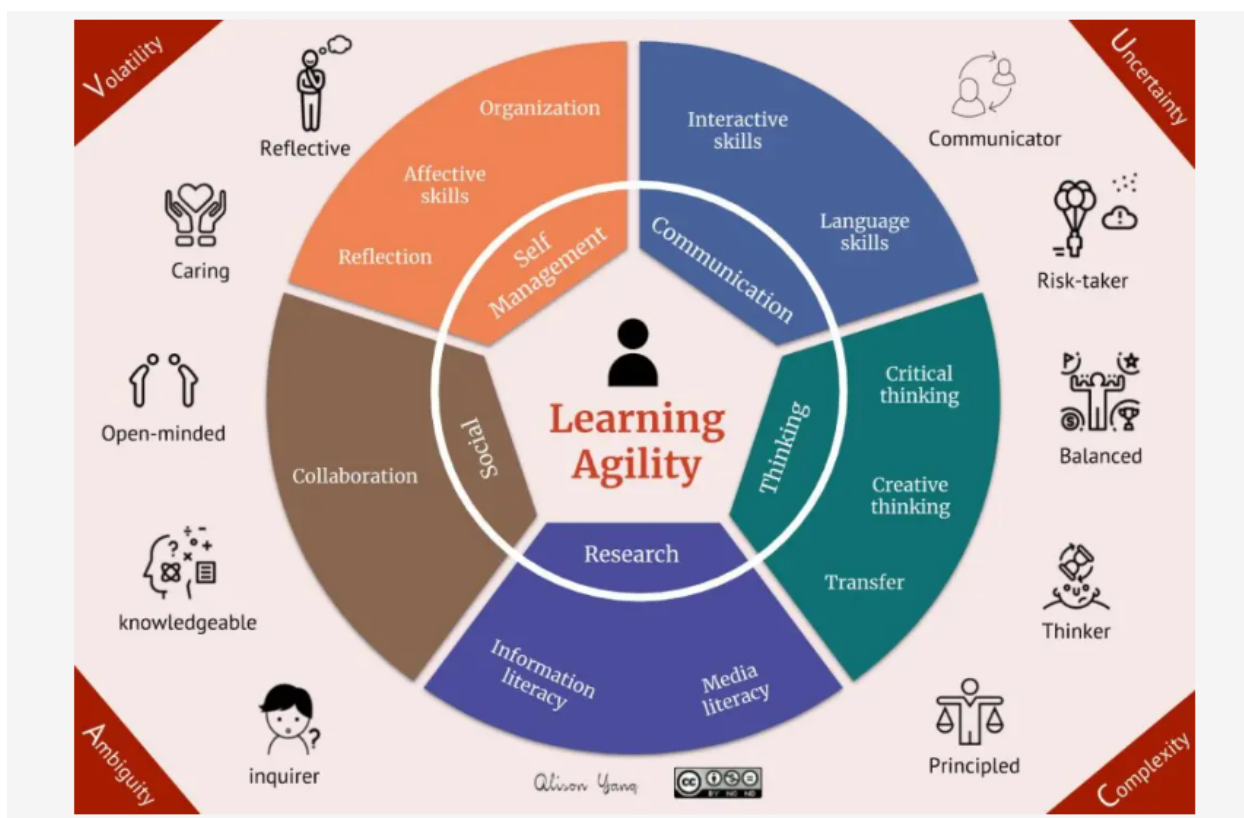


Image credit: <https://alisonyang.com/atl-skills/>

IB educators assist students in growing these abilities and pushing their learning potential while keeping this big picture in mind (figure 3). The academic objective (learning target), ATL skill indicator, and strategy can all be in alignment to achieve this

goal (figure 4). The most crucial part is that educators need to follow an evidence-based strategy to track students' development and conduct cognitive coaching conversations in democratic classrooms. In order for students to achieve mastery, the process of practicing and developing skills must be purposeful. As repetition of learning is the path to mastery, the approach must be used multiple times. Therefore, applying academic skills with ATL skills on formative assessments is crucial for a successfully finished summative assessment. That is how learning improves and transforms.

Figure 6 *The alignment of learning objectives, ATL skill indicator, and strategy*

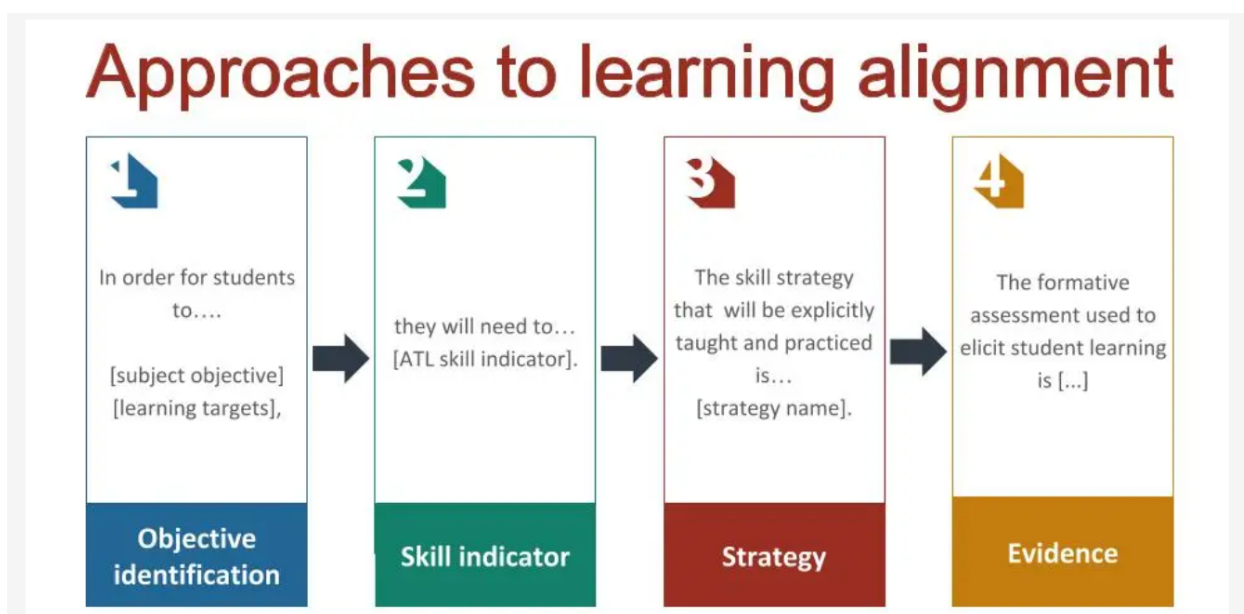


Image credit: <https://alisonyang.com/atl-skills/>

#### 4.2 How are the ATL skills applied in practice? Why do they matter for active learning? A Case Study: Nova IS, MYP I&S ATL Skills in Unit 1, Year 2

This case study investigates, analyzes, and explains the practical application of the ATL skills in the IB MYP Individuals and Societies course (Social Studies and Humanities), year 2 (grade 7), Unit 1. All the resources used for this case study are real learning data both hard copy and digital, I&S assessment documents and records, the assigned formative and summative tasks in the Individuals and Societies, Unit 1, grade 7, and students' samples from formative and

summative assessments of Unit 1: “War Journalism, Communication”. Included here are classroom observations, conversations with students, and students’ self-reflection rubrics.

Everything starts with a smart unit design. At the beginning of the unit, the statement of inquiry, which is the heart of the unit itself, was discussed with the students. The IB triangle Inquiry-Action-Reflection of research-based learning was followed through all the tasks and was linked to the IB Learner Profile qualities of students being inquirers and communicators. The ATL skills needed for the final summative task were shared with students and discussed at the very beginning of the unit, including the [MYP Command Terms](#). The [ATL Self-Reflection](#) rubric was given prior to the practice in action for students and the teacher to know the prior level. The same ATL skills self-reflection was given after 10 weeks when the final summative assessment of this unit was completed by all students to see the growth. The results show that around 65 % of the students achieved their proficiency level in using the ATL skills required for this unit. Inquiry starts with factual questions that relate to contextual knowledge and understanding, so content terms were introduced and practiced through Vocabulary Hunt. The Entry Point was a crucial formative assessment task that involved media literacy skills for communication, journalism, and critical thinking to evaluate news, where the academic knowledge and skills for the final summative were practiced and evaluated through meaningful feedback. The second level of conceptual inquiry was emphasized here, where students climbed to a higher level of thinking about the unit concepts and explored via research skills, evaluated, and created media products, applied media literacy and critical and creative thinking, exploring the concepts of journalism, information, and communication in the 21st century. Students applied the ATL Social Skills (collaboration in teams through building consensus and listening to each other’s ideas) and Communication (within their teams to share ideas and give each other peer feedback for revision, but also writing for different purposes and choosing the right medium to communicate their results from research, to synthesize their knowledge and understanding to create their own final product to communicate with their target audience, that was a video broadcasting of Fake News vs. Credible News, including Clickbait and applying ICT for their final product and research.

During the unit progression, the ATL skills were being practiced within different contexts exploring war correspondence and the milestones of communication development starting from the Crimean War, WW1, and WW2, till current events and crises (the Syrian Civil War and Ukrainian current crisis were critically analyzed in class from different perspectives like Ukraine, Russia, USA, France, UK, Macedonia, and China). The last formative task was The Crimean War Communication Timeline, which was like a skills rehearsal (all skills were the same, but the context changed) for the last summative evaluation, War Journalism, Communication during WW1 And WW2. In this assignment, students' academic objectives intertwined with the necessary ATL tools like communication, collaboration, research, and critical thinking to create a timeline of communication of war journalism in teams, each student focusing on 2-3 inquiries, using research methods to answer the question from both primary and secondary sources, paraphrasing to communicate findings and evaluate the credibility of their sources with the OPVL method. It is very obvious that all learning is connected to evaluation, they are inseparable parts since each learning needs monitoring, evaluation to check the growth on the learning continuum, and reflection. The ATL skills are necessary tools for experiential learning.



ATL Skills aligned with the summative task and academic objectives (practiced during the whole UNIT 1 10-week journey through formative assessment tasks and feedback)

- [ATL Self-Reflection](#) rubric was given after the completion of the summative assessment

### Social Skills

In order for students to communicate, collaborate and accomplish their projects and assessments in their groups, they need to work effectively with others, listen to different ideas, share responsibilities, build consensus, and give and receive meaningful peer feedback.

### Self-management

In order for students to manage tasks effectively, they need to learn self-management skills like practicing using the platforms, time management, bringing all the materials needed, etc.

### Communication

In order for students to successfully create the final product-Google Slides/Animoto/PowToon visual presentation, they need to practice writing for different audiences and purposes and use a variety of technology and media to deliver the final project to the target audience and give each other constructive peer feedback.

### Research

In order for students to complete the research plan about milestones of WW1 and WW2 communication, they need information literacy skills to access information and answer their sub-questions based on the research from both primary and secondary sources, paraphrase information and use it for their final product presentation, evaluate critically those sources, list them and create references with citations in MLA.

It is obvious that ATL skills boost learning toward the higher level of Bloom's Taxonomy.

Figure 7 *The Bloom's Taxonomy*

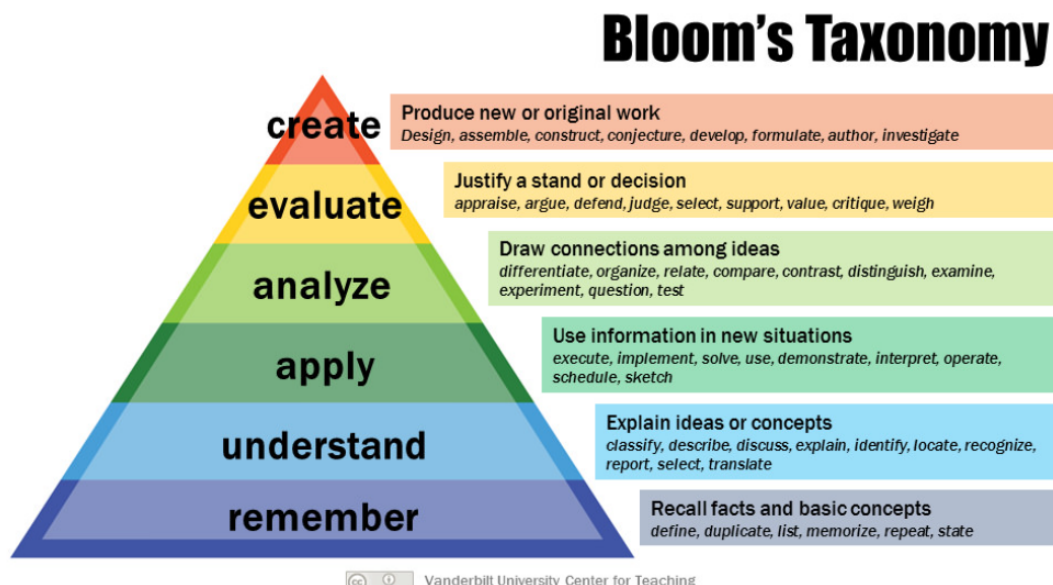


Image credit: <https://cft.vanderbilt.edu/guides-sub-pages/blooms-taxonomy/>

## Conclusion

In conclusion, humans learn best when they are actively involved in the learning process, using their cognitive and metacognitive skills. Learning by doing is a part of human evolution and naturally, all classrooms should mimic the real world with experiential learning and all students aware of their learning process and growth. The tools that each educator uses in teaching methods and models for students on how to approach learning are necessary to facilitate the academic journey and life skills in general. Those ATL skills are embedded in the IB educational philosophy and IB mission via IB Learner Profile, to the extent that they are an integral part of each subject unit design. Research shows that IB schools and some nations that reformed their education systems over the years, like Finland, use similar approaches to learning and teaching, and have the best education systems in the world. ATL skills are vital for the youth to be highly prepared for 21st-century careers, competitive in the global job market, and the complexities of the modern world in order to become caring global citizens who would evoke positive changes through social activism, sustainability, and conflict resolution.

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## Chapter 4.3 Assessments in MYP

### A Case Study: Assessment in MYP I&S, Nova International School

#### Introduction

Evaluation is one of the most essential parts of the learning process. There are several different types of 21st-century assessments used in schools to evaluate students' outcomes: formative (informal), summative (formal), self-assessment, portfolio (usually used for parent-student-teacher conferences, focus on metacognitive skills and students' reflections to set goals for improvements), blended assessment (collaborative teams, inquiry, given content, ATL-life skills, SasA, ICT), project-based/performance (PBL, includes a higher level of thinking, research skills, creating final product applying knowledge, skills, and understanding using information and media literacy skills, sharing it with the target the audience, digital skills), external standardized assessment (PISA, MAP, etc for comparison across nation/district, region, the wider community, globally,

etc), teachers' evaluations, and national and international accreditation of the school. This research paper analyses and elaborates on all the types of IB MYP assessments through the case study of Nova IS, Skopje.

#### 4.3.1 What is the purpose of evaluation in IB MYP schools?

All IB programs strive to produce internationally-minded individuals who recognize their shared humanity and responsibility for this planet and work to build a better and more peaceful world. Therefore, all eight subjects of MYP embed both academic skills and life skills in the learning process and assessments. All IB learners and educators strive to become one with the IB Learner Profile: inquirers, knowledgeable, thinkers, communicators, principled, open minded, caring, risk-takers, balanced, and reflective thus aligning learning outcomes with the IB mission. The aims of all eight MYP subjects state how the student may be changed by the learning experience, therefore active and student-centered learning is vital. All subjects use the 4 MYP criteria for an assessment called objectives: A, B, C, and D. There are additional interdisciplinary common objectives for students' final product: A, B, and C. The purpose of the assessment is to guide students through the constructive feedback process toward the proficiency level of the knowledge, skills, and understanding required (*Introduction and overview What are the stages in the life of an assessment?. ibo.org*). Throughout this process, student self-evaluation and reflection are encouraged to boost metacognition and students' ownership of their learning. At the end of year 5, the eAssessment is available for all students who exit MYP.

#### 4.3.2 A Case Study: What was the IB accreditation evaluation process like at Nova International School?

The IB authorization process for schools is a very important type of external evaluation of the quality of curriculum delivery and has three primary aims:

- To provide guidance and support to schools as they work towards authorization
- To confirm that the school is prepared to offer the IB program with fidelity to the IB's program standards and practices, rules, and regulations
- To plan for ongoing development and improvement (action plan) after authorization as an IB World School

The process of this IB accreditation consists of several steps represented visually in Figure 2. The NOVA IS of Skopje followed all the steps to the final IB accreditation.

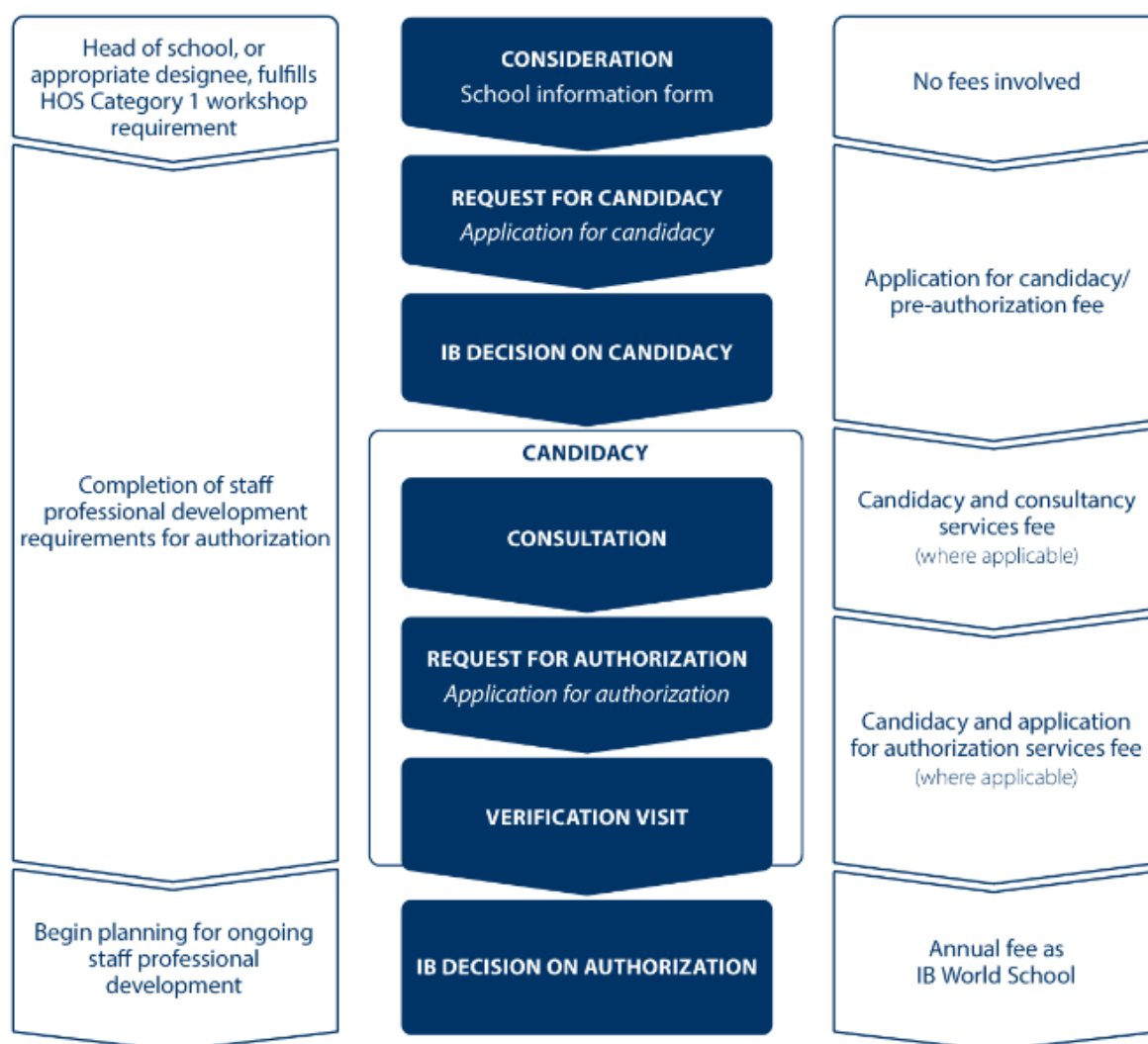
Figure 8 *IB authorization steps*

Image credit: <https://www.ibo.org/become-an-ib-school/how-to-become-an-ib-school/>

When the school leadership applied for the candidacy in 2019, some action steps were taken. Professional development IB Cat. 1 MYP Introductory was obligatory for all MYP faculty. From the moment Nova IS became a candidate school, an IB consultant to pre-assess the school for the final IB accreditation. Furthermore, the MYP faculty was trained in subject-specific MYP unit design Category 1, to facilitate the IB approaches to teaching, learning, unit planning, and assessments. It was necessary to align horizontally and vertically all the standards, unit topics, and subject progression via year 1, 3, and 5 rubrics. The leadership transformed more into the democratic model, empowering heads of the departments aka subject group leaders to lead and manage subject teams. It was required by IB that some samples of each subject-group unit plan in each year including interdisciplinary unit and service as action projects, the video recorded department meets

where department communication and collaboration could be assessed, assessment moderation on students' samples, students' samples with criteria-based grades both formative and summative and teachers' feedback to be submitted for that external assessment by the accreditors. Regular weekly meetings and workshops led by the MYP Coordinator and the Principal with the subject department leaders and with the whole faculty during the PLC time were an everyday reality.

Eventually, there were IB authorization 3-day visits, where the IB accreditors visited classrooms, assessed all the submitted samples and documentation, and interviewed the school leadership and each subject group in a separate meeting. It was a tremendous effort by every team member of every single MYP department, working together toward this common goal, the IB MYP accreditation. The Nova IS MYP was officially accredited by the IB in May 2022.

The IB final report of this evaluation for accreditation is an essential document for the school's development and improvement to be considered for the future action plan.

#### 4.3.3 In what ways does the MYP teachers' evaluation support student learning in Nova IS?

In order to achieve high-quality learning outcomes, Nova IS, as an accredited IB school, values high-quality teaching. The approaches to teaching reflect the ATL (approaches to learning). Each IB educator must be an inquirer and researcher, a communicator who collaborates with students and other teachers possesses excellent organizational skills, and is a role model for their students. The teachers need to plan wisely and embed the learning objectives (criteria/skills) with the ATL skills in their lesson plans. All formative and summative tasks need to encompass skills practice and constructive feedback for improvement. The methodology of teaching should be aligned with the IB framework of inquiry, mini-lessons, and student-centered classrooms with experiential learning. Teachers' evaluation is necessary in order to monitor teaching that directly affects learning and to set goals for further improvement. For that reason, in September, the Growth Policy Plan was shared and communicated with the whole IB faculty. The teachers' evaluation in Nova IS happens on two levels: informal and formal. The informal evaluation is conducted in a form of peer sharing and feedback on the sample unit plans or assessment designs. Additionally, class visits are encouraged where colleagues observe each other's classes and provide constructive peer feedback for these peer observations based on the ATT/ATL rubric and criteria A, B, C, and D. Each teacher shares students' surveys to receive additional feedback in a form of students' evaluation of that teacher and the subject taught.

The formal evaluation is conducted by the Nova secondary school principal using the shared rubric. Each teacher chooses a yearly IB ATT goal to work on and shares it with the principal during their conferences in September-October, at the very beginning of the academic year. The principal observes the classroom teacher and provides feedback (criteria and expectations shared rubric). Additionally, the principal reports on the ManageBac formative and summative tasks published by the teacher and shared with students. After this evaluation, the teacher has one more opportunity to work on the

improvements taking into consideration the principal's feedback and their set yearly SMART goal. All of this is noted in the Teacher's Portfolio in the dedicated section for role-specific goals.

When teacher performance is high and meets NOVA performance expectations, the focus remains on continual improvement and professional learning according to the needs of that teacher. If a faculty member is unsuccessful at meeting one or more of the expectations, they may be placed on an Intensive Improvement Plan at any time. In this case, the faculty member works closely with one, or more, supervisors or mentors/coaches to ensure the performance goals are being met. The support required will be decided between the principal and the teacher, with clear, observable expectations outlined in the improvement plan. A timeline for expected improvement will be established at the onset of the plan and will be revisited throughout the duration of its implementation.

There are additional informal observations by the principal during the school year to monitor teachers' growth. The evidence collected from both informal and formal observations, and a review of completed unit plans, in conjunction with the teacher's/staff member's own assessment, will form the basis for a rich end-of-year conversation with the principal. After the final meeting, an end-of-year narrative will be provided to the faculty member from the principal, along with the self-reflection by the teacher member, to be placed on the Professional Portfolio Website (Teacher's Portfolio).

#### 4.3.4 How do MYP Individuals and Societies (I&S) assessments reflect students' growth?

The aims of MYP Individuals and Societies (I&S) are to encourage and enable students to:

- appreciate human and environmental commonalities and diversity
- understand the interactions and interdependence of individuals, societies, and the environment
- understand how both environmental and human systems operate and evolve
- identify and develop concern for the well-being of human communities and the natural environment
- act as responsible citizens of local and global communities
- develop inquiry skills that lead toward conceptual understandings of the relationships between individuals, societies and the environments in which they live

The four objectives of the MYP Individuals and Societies encompass the factual, conceptual, procedural, and metacognitive dimensions of knowledge, skills, and understanding. Each objective is elaborated by a number of strands; a strand is an aspect or indicator of the learning expectation at that level. These objectives are called I&S MYP criteria A, B, C, and D. So the MYP assessment is criteria-based and focuses on skills and knowledge. Each criterion is labeled with achievement levels from 0-8 (*Individuals and societies guide*, 2014). The progression from Year 1 to Year 5 is reflected in the progression rubrics for Years 1 (grade 6), 3 (grades 7 and 8),

and 5 (grades 9 and 10). What you can notice from these progressions is that the complexity of myp\_command\_terms\_.pdf and skills enriches in depth and details.

Figure 9 MYP I&S Progression of Learning (*Individuals and societies guide*, 2014)

Individuals and societies in the MYP		
Planning a progression of learning		
Year 1 In order to reach the aims of individuals and societies, students should be able to:	Year 3 In order to reach the aims of individuals and societies, students should be able to:	Year 5 In order to reach the aims of individuals and societies, students should be able to:
Objective A: Knowing and understanding		
i. use vocabulary in context ii. demonstrate knowledge and understanding of subject-specific content and concepts, using descriptions, explanations and examples.	i. use a range of terminology in context ii. demonstrate knowledge and understanding of subject-specific content and concepts, through descriptions, explanations and examples.	i. use a wide range of terminology in context ii. demonstrate knowledge and understanding of subject-specific content and concepts through developed descriptions, explanations and examples.
Objective B: Investigating		
i. explain the choice of a research question ii. follow an action plan to explore a research question iii. collect and record relevant information consistent with the research question iv. reflect on the research process and results.	i. formulate/choose a clear and focused research question, explaining its relevance ii. formulate and follow an action plan to investigate a research question iii. use methods to collect and record relevant information iv. evaluate the research process and results, with guidance.	i. formulate a clear and focused research question and justify its relevance ii. formulate and follow an action plan to investigate a research question iii. use research methods to collect and record appropriate, varied and relevant information iv. evaluate the research process and results.



## Planning a progression of learning

Year 1 In order to reach the aims of individuals and societies, students should be able to:	Year 3 In order to reach the aims of individuals and societies, students should be able to:	Year 5 In order to reach the aims of individuals and societies, students should be able to:
Objective C: Communicating		
i. communicate information and ideas with clarity	i. communicate information and ideas in a way that is appropriate for the audience and purpose	i. communicate information and ideas effectively using an appropriate style for the audience and purpose
ii. organize information and ideas effectively for the task	ii. structure information and ideas according to the task instructions	ii. structure information and ideas in a way that is appropriate to the specified format
iii. list sources of information in a way that follows the task instructions.	iii. create a reference list and cite sources of information.	iii. document sources of information using a recognized convention.
Objective D: Thinking critically		
i. identify the main points of ideas, events, visual representation or arguments	i. analyse concepts, issues, models, visual representation and/or theories	i. discuss concepts, issues, models, visual representation and theories
ii. use information to give an opinion	ii. summarize information to make valid, well-supported arguments	ii. synthesize information to make valid, well-supported arguments
iii. identify and analyse a range of sources/data in terms of origin and purpose	iii. analyse a range of sources/data in terms of origin and purpose, recognizing values and limitations	iii. analyse and evaluate a wide range of sources/data in terms of origin and purpose, examining values and limitations
iv. identify different views and their implications.	iv. recognize different perspectives and explain their implications.	iv. interpret different perspectives and their implications.

Throughout the programme, students should engage with the curriculum and be expected to demonstrate their understanding at increasing levels of sophistication.

The range of assessed skills, techniques, and concepts, as well as the complexity of their application, must increase as students progress through the programme.

All eight subject groups must address all strands of all four assessment criteria at least twice in each year of the MYP. Assessment in the MYP is strongly correlated with the written and delivered curriculum. The assessment criteria for this subject category correspond to each of the MYP strands from I&S. This alignment and the more complex requirements for student performance at higher levels of achievement are shown in Figure 4 (criterion A).

Figure 10 *Alignment of objectives and criteria in MYP I&S (Individuals and societies guide, 2014)*

## A: Knowing and understanding

At the end of year 5, students should be able to:

- i. use a wide range of terminology in context
- ii. demonstrate knowledge and understanding of subject-specific content and concepts through developed descriptions, explanations and examples

Achievement level	Level descriptor
0	The student does not reach a standard identified by any of the descriptors below.
1–2	The student: <ul style="list-style-type: none"> <li>i. uses <b>limited</b> relevant terminology</li> <li>ii. demonstrates <b>basic</b> knowledge and understanding of content and concepts with <b>minimal</b> descriptions and/or examples.</li> </ul>
3–4	The student: <ul style="list-style-type: none"> <li>i. uses <b>some</b> terminology <b>accurately</b> and <b>appropriately</b></li> <li>ii. demonstrates <b>adequate</b> knowledge and understanding of content and concepts through <b>satisfactory</b> descriptions, explanations and examples.</li> </ul>
5–6	The student: <ul style="list-style-type: none"> <li>i. uses a range of terminology accurately and appropriately</li> <li>ii. demonstrates <b>substantial</b> knowledge and understanding of content and concepts through <b>accurate</b> descriptions, explanations and examples.</li> </ul>
7–8	The student: <ul style="list-style-type: none"> <li>i. <b>consistently</b> uses a <b>wide range</b> of terminology effectively</li> <li>ii. demonstrates <b>detailed</b> knowledge and understanding of content and concepts through <b>thorough, accurate</b> descriptions, explanations and examples.</li> </ul>

#### 4.3.5 A Case Study: Formative and Summative Assessments in MYP I&S, Nova IS

To what extent did the formative assessments and feedback help students improve their performance on the summative assessment in MYP I&S?

This case study explores and analyzes the application of formative and summative assessments, including students' reflections in the IB MYP Individuals and Societies course (Social Studies and Humanities), year 2 (grade 7), Unit 1. All the resources used for this case study are real learning data both hard copy and digital, I&S assessment documents and records, the assigned formative and summative tasks in the Individuals and Societies, Unit 1, grade 7 in ManageBac learning platform, and students' samples from formative and summative assessments of Unit 1: "Communication, War Journalism". Included here are classroom observations, conversations with students, peer feedback, and students' self-reflection rubrics. The learning journey and assessments here are analyzed by following Student 1, Student 2, and Student 3 progress. Here is the scale of MYP achievement levels: [Converting MYP Achievement levels into an MYP Grade - Strood Academy](#)

The whole learning journey starts with a smart unit design. At the beginning of the unit, the statement of inquiry (SOI), which is the heart of the unit itself, was discussed with the students, including the key and related concepts with the global context of this unit. The IB education is inquiry and skills-based, so the content is just provided for the students via the main topic for exploration and content vocabulary. The learning and assessment process in IB focuses on skills and criteria, rather than memorization of the factual content. The IB triangle Inquiry-Action-Reflection of research-based learning was followed through all the tasks and was linked to the IB Learner Profile qualities of students being inquirers and communicators. Besides the academic criteria/objectives, the required methods, and the ATL tools (Research paper 1) were practiced with each formative assessment all the way through the final summative assessment. The teacher started the unit with the SOI and explained the goals for the final summative task, and discussed with students all four criteria through the shared task-specific clarification rubric where each criterion and strand assessed was "unpacked" for students. This backward method is crucial for students to understand their "final destination" as if the GPS of the unit was given to them at the very start. Therefore, each formative task prior to the summative assessment will make sense to them and will motivate them to revise upon the feedback offered in order to master the knowledge and skills required for the final summative.

The 1st formative assessment of this unit "Communication, War Journalism" was Vocabulary Hunt where the content vocabulary was introduced, but the students had to research to find the answers to their terms, rather than receiving them from the teacher's lengthy lectures. The philosophy of students' ownership and student-centered experiential learning was set from the very beginning. This quiz was aligned with criterion A practice (Knowing and understanding). The ATL Skills of communication, collaboration, research, and critical thinking were introduced and practiced starting with this formative assessment within collaborative teams of students.

Criterion A: Student 1 scored 6, Student 2 scored 4, and Student 3 scored 6. Specific and constructive teacher feedback was provided for each student and peer feedback was encouraged within collaborative teams of students. The second formative task: Creating Credible News versus Fake News and Clickbait included more skills, and criterion C (Communication) was assessed. The operating teams had to research, and apply information, digital, and media literacy

skills together with critical and creative thinking in order to create the final news video broadcasting product. After each video presentation, oral peer feedback was provided beside the teacher's grade and written feedback in ManageBac.

Criterion C: Student 1 scored 6, Student 2 scored 5, and Student 3 scored 6.

The [ATL Self-Reflection](#) rubric was filled out by each student at this stage and at the end of this unit again so that the metacognition was fostered and self-assessment on growth.

Furthermore, the following formative assessment task focused on research, so criteria A (Knowing and understanding) and B (Research) were assessed through the inquiry of War Journalism during the Syrian Civil War. Peer feedback was encouraged within students' teams and the final teacher's grade and constructive feedback were provided.

Criterion A: Student 1 scored 5, Student 2 scored 3, and Student 3 scored 7.

Criterion B: Student 1 scored 5, Student 2 scored 1, and Student 3 scored 7.

Student 1 received written and oral feedback and was actively engaged and motivated to revise their work again (resubmit) in order to improve for the final summative. Student 2 didn't pay attention to the peer feedback given within their team, so the ATL skills of communication and collaboration were at the lower level and that affected their learning outcome. Additionally, this student failed to follow all the steps of research. The teacher-student conference was scheduled and directions for progress were given. Student 3 worked harder to take into consideration the previous formative feedback and peer feedback and showed growth.

The next formative task included criterion D (Critical Thinking) where the OPVL analysis of the credibility of sources used for students' research was practiced. Peer feedback in each team was provided including the teacher's formative feedback and grade.

Criterion D: Student 1 scored 5, Student 2 scored 4, and Student 3 scored 8.

Student 1 was very motivated to revise upon the feedback provided and asked for additional teacher feedback for improvement. Student 2 showed improvement in the motivation and ATL skills from the previous formative assessment and the feedback for further improvement in their critical thinking was provided (didn't revise again). Student 3 showed consistency in hard work, revising upon the feedback offered, and produced high-quality work with excellent critical analysis of the research source used. It is obvious how each formative assessment was a ladder of practicing all skills/criteria needed for the final summative assessment.

The final formative assessment: Crimean War Timeline of Communication, encompassed all four criteria (A, B, C, and D) and it served as a rehearsal for the upcoming summative assessment.

The peer feedback was encouraged through  TAG Peer Feedback I&S form and the teacher feedback was in the form of a narrative comment for improvement this time, not a grade.

All three students were provided with criteria-based feedback for improvement.

The final summative assessment: WW1 and WW2 Communication Timeline focused on all four criteria practiced during the prior formative tasks (A, B, C, and D). Students' academic objectives intertwined with the necessary ATL tools like communication, collaboration, research, and critical thinking to create a timeline of communication of war journalism in teams, each student focusing on 2-3 inquiries, using research methods to answer the question from both primary and secondary sources, paraphrasing to communicate findings and evaluate the credibility of their sources with the OPVL method. The final product here was a visual presentation where students used their medium of choice to communicate their findings.

Criterion A: Student 1 scored 7, Student 2 scored 5, and Student 3 scored 8.

Criterion B: Student 1 scored 7, Student 2 scored 5, and Student 3 scored 8.

Criterion C: Student 1 scored 7, Student 2 scored 5, and Student 3 scored 8.

Criterion D: Student 1 scored 7, Student 2 scored 5, and Student 3 scored 8.

Student 1 was highly motivated and worked hard on all the formative assessment feedback to grow academically in all four criteria for the final summative assessment. Student 2 improved stamina and motivation, including the ATL skills in the middle of the formative assessment journey, which helped them show growth on the final summative assessment, but still needs to work on consistency and self-management to improve academics.

Student 3 showed consistency in both hard work, motivation, ATL skills, and academics, so the final summative assessment reflected their excellent performance with the highest grades.

It is very obvious that all learning is connected to evaluation, they are inseparable parts since each learning needs evaluation to check the growth on the learning continuum, constructive feedback for improvement, and reflection. Once again, the [ATL Self-Reflection](#) rubric was filled out after completing the final summative. The next step was again metacognition, each student set a SMART goal for improvement based on the academic criteria grades and ATL skills development. This was shared with their parents during the student-led parent-teacher-student conferences.

#### 4.3.6 MYP Interdisciplinary Units (IDU) and IDU I&S assessments, Nova IS

MYP interdisciplinary teaching and learning builds a connected curriculum across different subjects to deepen the knowledge, skills, and understanding of the topic and concepts. It prepares students for further academic thematic study and for life in an increasingly interconnected modern world. As Wagner and Fullan propose, transdisciplinary projects are invaluable classroom experience for all students to develop communication, collaboration, deep learning and skills, critical and creative thinking, etc. This transdisciplinary approach is an inevitable strategy for preparing students for the 21st century. The MYP uses concepts and contexts as starting points for meaningful integration and transfer of knowledge and inquiry across subject groups and disciplines. Furthermore, designing and planning interdisciplinary units requires effective communication and collaboration among different departments' teachers. MYP schools are responsible for engaging students in at least one collaboratively planned interdisciplinary unit for each year of the program.

For instance, at Nova IS, MYP I&S and ELL teachers, through collaborative approach, designed two interdisciplinary units for year-7 students (grade 7), "Imperialism, Historical Commodities" and "Women Empowerment (Empower the Powerless)".

■ Imperialism, Historical Commodities (1).pdf

■ Women's Empowerment (Empower The Powerless).pdf

When designing an IDU, teachers of both subjects agreed upon the key and related concepts, global context for exploration, and created the statement of inquiry. These teachers also created a final IDU common summative assessment project, a research

report on one historical commodity that interconnected nations and caused struggles for power and conflicts in the world during the era of Imperialism. Each student worked on different commodities and showcased their skills and understanding, also team collaboration, communication, and constructive feedback. Therefore, prior to the final summative assessment, in both I&S and ELL classes, students worked on many meaningful formative inquiry tasks to develop certain knowledge, understanding, and skills required for the big summative assessment. After that, each of the I&S and ELL teachers assessed the same IDU summative project separately, to mark each student's progress in their subject against the MYP subject criteria A, B, C, and D. On the other hand, the three IDU criteria (A:Evaluating, B:Synthesizing, and C: Reflecting) were graded by both teachers, so the students received additional three IDU grades, besides their four subject grades. As an exit point of the first IDU, Imperialism, Historical Commodities, students participated in a class Debate “Modern Imperialism” in I&S class and a Socratic Seminar “Modern Slavery” in ELL class where through critical thinking they utilized research results to create valid arguments and defend their standpoint. Furthermore, in the second IDU Empower the Powerless, students participated in activism summative projects to raise awareness in the local community about different types of social injustice that still exist in modern societies. As a part of their IDU summative assessment, students worked in collaborative research teams to formulate their own questions and inquire facts from credible primary and secondary sources about certain social injustice and violation of human rights across the globe. The students were case-studying certain region/continent and later analyzed and compared data to create powerful PSA videos (Public Service Announcements).

### Conclusion

In conclusion, active and student-centered learning and assessment are vital for 21st-century education. Since the approaches to teaching and learning should shift toward skills and a higher level of thinking processes, the assessments need to change too. All IB MYP subjects use the four criteria for an assessment called objectives: A, B, C, and D. The students have many opportunities through formative tasks and feedback to practice the skills required. The research shows that students who work on peer and teacher feedback for improvement on all the formative assessments and are motivated to succeed, show better grades and growth on the final summative assessment.

The purpose of the assessment is to guide students through constructive feedback in a form of mentorship, toward the proficiency level of the knowledge, skills, and understanding required. It is evident that throughout this process, student self-evaluation and reflection are encouraged to boost metacognition and students' ownership of their learning. The formative assessment is the heart of learning and practicing all skills needed for students to achieve their learning goals for the final summative assessment. All summative assessments should be criteria/standards-based, include collaborative projects that embed real-life scenarios and careers so that students make sense of their learning and are getting well-prepared for the 21st-century global job market and reality. It is necessary to engage students to become active and awaken participants in their learning and assessment processes. At the same time, teachers' evaluations are crucial in order to

monitor and evaluate the approaches to teaching and curriculum delivery methods that impact the learning process of students. Additionally, national and international accreditation should evaluate the schools to monitor the quality of learning in educational institutions and provide recommendations for further developments and next action steps. The assessment is vital for all participants in education: students, teachers, leaders, and schools to set goals for improvement through constructive feedback and meaningful dialogue.

“Review is essential to evaluation, which is essential to progress”

Melissa Steginus

## **Chapter 5: Comparative Analysis of the Education Systems in the USA, Republic of North Macedonia, and Finland**

### Introduction

Education system of one country is the root of society, therefore crucial for the well-being of all citizens. This research analyses and compares the education systems in the Republic of North Macedonia, the USA, and Finland on five grounds: education system structure, national curricula and standards, ATT pedagogy with the ICT implementation, language policy, grading systems, and the international educational standards for student learning outcomes for math, reading, and science-PISA 2018 test scores.

The information here is factual and objective, there are no political, national, religious, cultural, or gender biases since it comes from credible sources, the most recent data and statistics, government sources, education associations, a survey, and official charts. The purpose of this research is to explore and analyze the strengths and weaknesses in each of these educational systems so that the policy-makers of the educational reforms could apply them in their strategic planning. The findings of this kind of inquiry could help the North Macedonian Ministry of Education identify the best and most effective practices which could be implemented when changing and improving the public education system in collaboration with all the educational leaders in the RNM.

#### 5.1 Comparison of the structure, national curricula, standards, pedagogy (ATT), and ICT implementation in these three education systems

What are some similarities and differences between the education systems in the USA, North Macedonia, and Finland?

In the United States, the years of mandatory public education start from Kindergarten (in 20 states, age 4/5/6) through 12th grade (age 17 or 18). The minimum age to begin compulsory education ranges from 5 to 7 years old, with 6 being the most popular. The average age at which



mandatory education ends can range from 16 to 18 (from state to state). Mandatory school education finishes once the student completes the 12th year of school. School years are referred to as "grades" in the United States. The academic year typically runs from August or early September until the end of May or early June, depending on the length of the year and the number of holidays, vacations, and snow days occurring during the year in some states. In the United States, there are typically 160-180 school days in an academic year of compulsory education but the exact number mainly depends on the state. Many national and international standardized tests serve as a reference for the academic performance of all students and teachers. Although this increases the sense of accountability and pure numeric data statistics, there is a lot of pressure on educators and students, the pedagogy revolves around test-taking skills with the common goal being the "numbers" on the tests, rather than critical and creative thinking, including equity and well-being of all students. Typically, there are additional defined curricular criteria and/or standards that prospective graduates must complete or surpass in order to get a vocational, academic, college preparation, honors, or Regents diploma. The Advanced Placement (AP) program of the College Board is also available to students in a large number of private and public secondary school systems in the United States. This program enables qualifying students to enroll in beginning college-level courses in a few specific disciplines delivered by qualified teachers. The International Baccalaureate (IB) is becoming more and more popular as an optional route offered by both public and private secondary schools. To complete the IB requirements, students typically need to continue their education through the 12th year for an additional summer or semester ("The American curriculum (although a better name would be '50 states 50 curricula')." *The Good Schools Guide*).

Similar to the US, compulsory education in the Republic of North Macedonia starts at the age of 6 (grade 1) and through 12th grade (age 18/19). Primary and Secondary schools are compulsory and free according to the North Macedonian law of education. The academic year starts on September 1 and ends on June 10 for all primary and secondary schools, with around 180 school days on the academic calendar. Students enter the mandatory first grade at the age of 6 and finish high school at the age of 18/19. Secondary school students by the end of their 4th year of study must take a state matura exam in order to proceed with higher education. The technical and other vocational schools provide training for a variety of occupations, including technological ones. A four-year course is offered by the schools of the arts, music, and ballet. These schools require admission exams for students to enroll. They take a final exam at the conclusion of their education and are then eligible to enroll in institutions. Higher education, similar to the others, offers bachelor, master, and doctoral studies ("EDUCATION SYSTEM IN MACEDONIA." *EuroEducation.net*).

On the other hand, Finland has always been a top runner in education (PISA 2015, 2018). The mandatory school in Finland does not begin for children until they turn 7, taking into consideration their educational philosophy of children being happy and healthy, and enjoying their childhood. Furthermore, there is no homework and no standardized testing until they reach high school. Finnish education also provides preschool for 5-7-year-olds where the emphasis is on playing and socializing in and outside the classroom ("Education Systems Around The World: A Comparison." *LinkedIn*). The academic year for Finnish students in primary and secondary schools begins every year in mid-August and ends in May with a total of 190 school days for Finnish students in compulsory education. The Finnish education system allows students to continue their studies at a higher level at any point when they decide. Upper secondary general and vocational diplomas grant admission to higher education. To prevent pointless study overlap,



the recognition of prior learning procedures has been created. The matriculation test that the students perform after finishing high school, is the only exam required for enrollment in a university in Finland. The purpose of universities is to carry out scientific research, and on the basis of that research, to deliver instruction and postgraduate education. Higher education that is professionally focused includes polytechnic and UAS programs. R&D (research and development) is done at polytechnics and UAS to enhance teaching and advance regional development while also preparing professionals to meet the demands of the labor market.

### Comparison of the structure, national curricula, standards, pedagogy (ATT), and ICT implementation in these three education systems

#### 5.1.1 What is the structure of the US, North Macedonian, and Finnish education systems?

More or less, these three education systems have a similar structure, with some minor differences in when compulsory education begins, and when secondary finishes. Nevertheless, all students finish their compulsory education (end of secondary school) around the age of 18 (RNM some students finish secondary school at 19, Finland 18, USA 17/18) and perform some kind of state exam in order to enter higher education.

Table 1

*The structure of the education systems in the USA, North Macedonia, and Finland*

What is the structure of the education systems in the US, North Macedonia, and Finland?					
1	USA	2	MACEDONIA	3	FINLAND
<ul style="list-style-type: none"><li>• Pre-primary/K (age 4/5)</li><li>• Primary (age 6)</li><li>• Middle (10-14)</li><li>• Secondary (13/14-17/18)</li><li>• Higher education (18-)</li></ul> <p>Scheme: 2-4-3-6-(2-5)</p>		<ul style="list-style-type: none"><li>• Primary (age 6)</li><li>• Secondary (finish at 18/19)</li><li>• Higher education (18/19-)</li></ul> <p>Scheme: 9-4-(2-4-6)</p>		<ul style="list-style-type: none"><li>• Pre-primary (age 6)</li><li>• Primary (age 7)</li><li>• Secondary (finish at 18)</li><li>• Higher education (18-)</li></ul> <p>Scheme: 1-8-(2-4)-(2-4-6)</p>	

Information in Table 1 from: [euroeducation.net](http://euroeducation.net) (USA and RNM) and <https://www.oph.fi/en/education-system> (Finland)

### 5.1.2 What are the official curricula, national standards, and pedagogy in the USA, Republic of North Macedonia, and Finland?

Despite the absence of a national curriculum in the US, states, school districts, and national groups do mandate or suggest the adoption of specific standards as the foundation for educational practice. In addition, state requirements must be increased in order for all 50 states to obtain federal funding, according to federal law. Above all, all American schools—public or private—must be accredited by one of the accrediting organizations recognized by the US Department of Education. The American Common Core State Standards for English, Language Arts, Math, History and Geography (Social Studies), and Next-Generation Science Standards serve as the foundation for the US Curriculum. With the introduction of these Common Core Standards and Next Generation Science Standards in the USA states, the gap between all 50 states is gradually closing and students are more prepared for university and beyond since the focus shifted to creative and critical thinking, inquiry, and soft skills. This is a “journey” since there is still no mandatory national curriculum and the quality of education and standards still vary between states (*Home | U.S. Department of Education*, <http://www.ed.gov>). On the contrary, in the Republic of North Macedonia and Finland, there is a national curriculum with standards that guides the instruction of all the public primary and secondary schools. In North Macedonia, the attempt to shift the focus from content-based, factual knowledge and memorization of lectures from the textbooks (the lowest level on Bloom Taxonomy Pyramid), toward skill-based learning occurred for the 1st time with a spiral model of math and science curriculum-Cambridge International Curriculum in 2014. In the initial stage of the project, all Macedonian state primary schools' Grades 1-3 received new math and science curricula and textbooks, and later grades 4-6. In September 2014, educators began applying these new curricula in primary schools. The approaches to teaching in all public schools need urgent “fix” and consistent reform toward inquiry-based learning and critical and creative thinking. If we 1st take a look at the levels of the cognitive skills and thinking processes in the Bloom Taxonomy (objectives for teaching and learning), we could understand where all the pedagogies in the world need to aim: higher level i.e. critical and creative thinking and metacognition.

However, PISA 2018 scores did not improve even after the Cambridge IC introduction, since it lacked consistency, professional development, control/evaluation and reflection to be sustained. Recently, in 2021 (after reviewing PISA 2018 scores) standard-based learning was introduced in grade 1 and all elementary years, where there is more integration suggested among subjects, the students learn more in-depth and practice skills to make better connections of what they learned (Georgievski, Nenad. “First 2 months with new elementary education concept in North Macedonia – are there results and what has to be changed?”).

“These standards focus on the knowledge, skills, and understanding that the students will take with them when they finish elementary education. These are grouped into 8 areas: language literacy, use of other languages, mathematics, natural sciences and technology, digital literacy, personal and social development, democratic culture and citizenship, entrepreneurship, and artistic expression and culture. These have the competencies for lifelong learning installed in them that are contained in the Recommendation of the European Union’s Council dating from 2018 that were adjusted in accordance with the age of the students” (qtd. Barbareev, 2021).

The role model for the RNM and the US education system would be Finland. Why?

One sentence answer would be Uniquely created educational policy toward well-being, equality, equity, and inclusion in teaching and learning. The pedagogy (approaches to teaching and learning) and curriculum are closer to IB educational framework i.e. inquiry-based learning with critical and creative thinking processes, holistic child development as a global citizen, and international mindedness with the focus on all life skills, well-being, empathy, sustainability, social justice, and activism. Moreover, there are no external standardized tests used to rank students or schools in Finland to create competition, anxiety, and stress. Finnish teachers are more mentors who provide regular constructive feedback to students in narrative form, emphasizing descriptions of their learning progress and areas for growth. The matriculation test is the only exam required for enrollment in a university in Finland. It's standard practice for students to take this series of four open-ended tests that place an emphasis on problem-solving, analysis, and writing, even if it's not necessary for graduation or admission to a university. The national core curriculum offers teachers suggested assessment standards for particular grades in each topic as well as in the annual final evaluation of student achievement. Following that, local educators and educators develop a more thorough curriculum, a set of learning outcomes for every school, and methods for evaluating curriculum benchmarks using those principles. The primary goal of student evaluation, according to the Finnish National Board of Education, is to direct and promote students' personal reflection and self-evaluation. Teachers provide verbal and narrative feedback while giving pupils formative and summative evaluations. In Finland, assessment is utilized to foster students' active learning skills by posing open-ended questions and assisting students in responding to them through consistent feedback for further revision. Inquiry is a significant focus of learning in Finland.

Table 2

*National curricula and standards of the USA, RNM, and Finland*

What are the national curricula and educational standards in the USA, North Macedonia, and Finland?					
1	USA	2	MACEDONIA	3	FINLAND
	<ul style="list-style-type: none"><li>No uniformed and mandatory US national curriculum, but recommended by US Department of Education: American Common Core Standards for English, Language Arts, Math, History and Geography (Social Studies), and Next-Generation for Science</li><li>IB curriculum available in some schools</li></ul>		<ul style="list-style-type: none"><li>Macedonian national curriculum plus Cambridge IC for Math and Science</li><li>IB curriculum available in one high school (Josip Broz-Tito, Skopje)</li></ul>		<ul style="list-style-type: none"><li>Finnish national curriculum as a guide for each school/skillful teachers to develop their own units and lessons</li><li>All schools follow the same values/standards/curricula, so every district's school is great, all teachers are high-qualified and educated as researchers, all schools are equal</li><li>All public schools similar to IB</li></ul>

Table 3  
*ATT (pedagogy) and ICT implementation compared*

What are the ATT (Pedagogy-Approaches to Teaching) and ICT integration in the education of the USA, North Macedonia, and Finland?		
1   USA	2   MACEDONIA	3   FINLAND
<ul style="list-style-type: none"> <li>*PBL and research, but not enough focus on the well-being and life skills</li> <li>*Standardized tests for accountability (external tests both national and international oriented for ranking and finances), AP and IB exams for entering better universities</li> <li>* No equality and equity yet, division still exists between the rich vs poor kids/schools, big corporations and many private schools weaken the public system, elite universities</li> <li>*ICT highly integrated, resourceful classrooms</li> </ul>	<ul style="list-style-type: none"> <li>*Content from a textbook, pedagogy focus on lecturing, memorizing and retelling lessons, not so much on research and critical and creative/higher order of thinking skills</li> <li>*Many reforms lack consistency, monitoring, reflection, and evaluation, society with segregated political interests, equality better, equity not yet</li> <li>*State matura exam to enter higher education</li> <li>*ICT integration ongoing, slow and inadequate so far, lack of funds, resources, strategy, training, consistency, evaluation of processes</li> </ul>	<ul style="list-style-type: none"> <li>*Inquiry, research-based, Interdisciplinary approach, PBL, constructive feedback via assessments, reflection, real-life connection, interdisciplinary approach, soft skills, social justice, civics, activism, well-being</li> <li>*No standardized tests except for the matriculation exam end of secondary</li> <li>* Equality and Equity, social care</li> <li>*ICT highly integrated in the learning and teaching, grade 1 coding lessons</li> </ul>

### 5.1.3 To what extent is ICT implemented in the education of the US, North Macedonia, and Finland?

In the pre-COVID setting, the 2018 International Computer and Information Literacy Study (ICILS) surveyed eighth-grade instructors from 14 different educational systems regarding ICT resources, including participants from the United States. According to the study's findings, 86 percent of eighth-grade teachers in the US and across all ICILS 2018 education systems "strongly agreed" or "agreed" that using ICT in the classroom is a priority. Only 61 percent of eighth-grade teachers in the United States "strongly agreed" or "agreed" that "there is sufficient opportunity for me to gain knowledge in ICT," despite the fact that 86 percent said that "ICT is considered a priority for use in teaching. The fact that "there is enough time to design courses that involve ICT" was also "highly agreed" or "agreed" by 62 percent of eighth-grade instructors in the United States. Future research and studies should consider how these discrepancies may have affected teacher capacity during the abrupt switch to 100% online learning brought on by the coronavirus epidemic. In general, the results from this survey suggest that U.S. teachers are more resourced in ICT in comparison with their international peers, and they use ICT at a similar frequency at school when teaching (Rathbun, Amy, and Stephen Provasnik. "NCES Blog | Teaching with Technology: U.S. Teachers' Perceptions and Use of Digital Technology in an International Context." *National Center for Education Statistics*).

Finland stands out as the top country in ICT implementation in their compulsory education, according to the European Commission Digital Economy and Society Index.

Finland uses the cloud more than any other European country – and ranks fourth in the world when it comes to entrepreneurship and opportunity, according to the Legatum Institute. Digitalization in Finland education is extensive and it starts from the first grade of primary school and consists of formal and informal technology education, in the form of extracurricular programs. An especially important reform by the Finnish Ministry of Education and Culture happened in 2015, the “Digital Leap”. The objective of this project was to quickly digitalize schools’ infrastructure, resources, and pedagogy in general. There was intensive training for educators and students on how to best implement ICT in learning and teaching. A strong teaching force and a technical infrastructure are two structural foundations that the Finns have invested in to help with pedagogical interaction (sound broadband internet access and educational tools so that teachers can navigate different pedagogic proposals and environments). Smaller, under-resourced schools have been fewer in number, while huge superschools have been built to hold greater resources for many students. One of their main concepts is that there should be fewer, better-resourced schools rather than many, underfunded schools. Schools moved one step further in their adoption of digital technology than did the rest of society. Screen time does not equate to learning. As a result, Finnish schools chose to give everyone access to the internet and to give both teachers and students training on how to utilize it for learning and well-being. They do not impose digitalization but rather ensure that all schools are prepared for teachers and students who wish to experiment with digital tools (“Educational Technology | ICT | Finland.” *CCE Finland*). Because of this, and excellent collaboration and teamwork in Finnish schools involving parents as well, Finnish schools were well prepared for the COVID outbreak in 2019, and even when their schools shifted to DL (distance learning) model, there were not any bigger issues by students, teachers, and parents.

On the contrary, Macedonian education was poorly prepared for the pandemic virtual learning environment since there had not been significant efforts in digitalization in Macedonian education till 2018. Furthermore, one in seven students could not follow distance learning because they didn’t have their own devices nor the Ministry of Education distributed tablets/Chromebooks/computers to every student in the country (Apostolov, Vlado. “Blank Screens: Lost Opportunities to Digitalize Education Haunt North Macedonia.”).

To conclude here, the RNM has made substantial and individual attempts to digitize education for years; what was lacking once again, was careful planning and consistent idea implementation. Most often, the political parties would focus mostly on the promotion of digitalization in public and on social media to emphasize their political programs and to beat the opposition, the funds were used for purchasing devices, but the professional development of the educators and students was lacking or was inconsistent. Additionally, many computers would end up in school basements or private homes, and many damages and uncontrolled thefts of the equipment happened. Once again, political corruption and personal interests were dominating the national common goal to digitalize Macedonian education and transform learning and teaching toward the 21st century.

Table 4

*Timeline of ICT reforms in the Education Sector of North Macedonia*

Digitalization process in education of the Republic of North Macedonia
<ul style="list-style-type: none"> <li>● 1986, Informatics classes were introduced in mandatory education</li> </ul>

<ul style="list-style-type: none"> <li>2002, more serious digitalization occurred with China donating 6,000 computers to Macedonian public schools, after that, digitalization depended just on donations till 2007</li> </ul>
<ul style="list-style-type: none"> <li>2007, The VMRO DPMNE government initiative “Computer for Every Child” procured 100,000 computers for students in the public education sector. From 2007 to 2009, the state bought 65,000 small 10-inch laptops for teachers and children from first to third grade, as well as 100,000 desktop computers. The project's acquisition and promotion appeared to have consumed the majority of the energy, with the computers themselves then appearing to have virtually disappeared.</li> </ul>
<ul style="list-style-type: none"> <li>2010-2013: The State Audit Office indicated in its annual report for 2010 that the Ministry of Education did not reach agreements with many schools to take over the computers, which serves as more evidence of this issue. Significant computer equipment damage has been found, and in some schools, the technology has not yet been completely utilized, it was noted. Thefts were brought on by negligence. After reviewing the scant police bulletin collection, BIRN discovered that during the project's first three years, from 2011 to 2013, there were roughly a dozen violent school burglaries per year and significant amounts of computer equipment were stolen. So consistent and responsible reform is needed, including regular controls and evaluation of this process, setting goals, and offering additional training in ICT implementation.</li> </ul>
<ul style="list-style-type: none"> <li>2016-2017: In 2016, the VMRO DPMNE government intended to purchase tablets for high school students, for students in grades 6 through 9 the following year, and to finish buying tablets for kids in grades 1–5 by 2018. But despite numerous public announcements and the allocation of funds necessary for its completion, the project was never completed.</li> </ul>
<ul style="list-style-type: none"> <li>2018/2019: SDSM government succeeded the “throne”, The idea of purchasing tablets once again became significant, the plan was to switch to tablets to replace all textbooks, converting all schoolbooks to electronic format (ebooks) so that kids could read from them on the gadgets, transforming toward “paperless” and “more green” education.</li> </ul>
<ul style="list-style-type: none"> <li>2019-2023, an ongoing digitalization, but nothing efficient on the horizon yet.</li> </ul>

*Information in Table 4 adapted from: [Blank Screens: Lost Opportunities to Digitalize Education Haunt North Macedonia | Balkan Insight](#)*

5.2 What is the language of instruction and foreign language acquisition policy in the USA, North Macedonia, and Finland?

"Learn a new language and get a new soul."  
Czech Proverb

Despite the lack of an official language policy, the United States has managed to achieve a very high level of monolingualism to the degree that speaking a language other than English is often not required. Logically speaking, since English is the world's "lingua franca" of the 21st century, English language acquisition is mandatory and embedded in primary and secondary education curricula around the globe. Therefore, so many Americans lack the motivation and stamina to learn other languages. Currently, 91% of US high schools offer foreign language programs and Spanish is the most widely taught second language. After Spanish, the next most popular languages for foreign language enrolment are French (15%) and German (4.5%). The statistics show that 40 million people in the US speak Spanish at home. It is seen as a key language for trade and cultural exchange due to its geographical location, but still, it is not included as an official language of instruction. This was the reason for opening Spanish immersion dual schools in the last decade in the US where 50% of the instruction is in a non-English language. Recently, the new trend is Chinese immersion schools. Although the Spanish population is at the highest level of minority, the English language is the language of instruction in all 50 states of the USA. Second language learning is not mandatory in 47 states of the USA. New York and New Jersey require just 1 year of foreign language study to graduate whereas Michigan and Washington DC require 2 years (McGibney, Sean. "Foreign Language in High School Statistics for the US, UK and EU." *Newsdle*). As a result, America has fallen behind other nations in terms of knowing and using foreign languages. In comparison to people in Europe, where more than half are bilingual, only 1 in 5 Americans can speak another language fluently.

On the contrary, North Macedonia and Finland have better language policies and more equality and diversity in approaches to language learning and instruction. For instance, the official languages of instruction in North Macedonia are Macedonian, Serbian, Albanian, and Turkish. Foreign language instruction begins in the first grade, or at age 6 when children are exposed to English as their first foreign language. Local languages are presented to the kids in the fourth grade (for example, the Macedonian language is introduced to Albanian, Turkish, and Serbian groups). In grade 6, French, German, and recently Italian, are offered as options to students. In secondary schools, students continue with the language acquisition classes in English plus 1 foreign language. Finns are in a leadership position with language policy, since with the most recent reforms and funding, they plan to integrate all the languages of the immigrants into their education for more equitable learning and preserving different cultures. In the Finnish national curriculum, four different languages beyond each student's mother tongue are included in basic education in Finland (two of them are obligatory and two of them are optional). From January 2021st, students started learning English as a part of the A1 syllabus from first grade. The A2 curriculum starts in grades 3-6 and offers an optional language, typically Spanish, German, or Russian. The other required language course is the B1 syllabus. It starts in the sixth grade and typically concentrates on the second national language, such as Swedish or Finnish. Spanish, German, Russian, or French are examples of B2's optional foreign languages that start in grade 8 and is taught in accordance with the expertise of the teachers who can teach them. In addition to formal education, the Finnish government values children learning languages other than Finnish and Swedish at a native-speaker level. For instance, funding has been made



available to provide additional language instruction in other languages that immigrant or mixed-lingual children may speak at home. Through the program, more than 50 languages have been taught (“Foreign language teaching in Finland’s world-leading education system. Learn from the best!” *Sanako*).

Table 5

*Comparison of the official language(s) of instruction and foreign language acquisition*

Language of instruction and foreign language acquisition policy			
1	USA	2	MACEDONIA
	<ul style="list-style-type: none"> <li>English is the only official language in all the states</li> <li>Immersion schools/bilingual (Spanish &amp; Chinese)</li> <li>Only in 2 states mandatory foreign language (1-2 years)</li> </ul>		<ul style="list-style-type: none"> <li>Macedonian, Albanian, Serbian, and Turkish official languages of instruction</li> <li>Foreign: English from grade 1, then German/French from grade 6</li> <li>Italian introduced in some schools</li> </ul>
3	FINLAND		
	<ul style="list-style-type: none"> <li>Finnish, Swedish official</li> <li>Foreign: English from grade 1, then German/French/Russian</li> <li>Recent reform: 50 languages of immigrants to be included</li> </ul>		

5.3 What are the similarities and differences between the Grading Systems in North Macedonia, the USA, and Finland?

Table 6

*Comparison of the Grading systems in North Macedonia, USA, and Finland;*

*Primary and Secondary Schools*

Macedonia	USA	Finland	Grade Description
5	A	10	Excellent
4	B	9	Very Good



3	C	8	Good
2	D	7/6/5	Satisfactory
1	F	4	Unsatisfactory

\*Finland's upper secondary schools use the numeric grades 0-7, with 2 being a passing grade

Table 7

*Comparison of the Higher Education Grading System in Macedonia, USA, and Finland*

Macedonia	USA	Finland	Grade Description
10/9	A	5	Excellent
8	B	4	Very Good
7	C+	3	Good
7	C	2	Satisfactory
6	D	1	Pass
5	F	0	Fail

Information in Tables 6 and 7 from: [https://en.wikipedia.org/wiki/Grading\\_systems\\_by\\_country](https://en.wikipedia.org/wiki/Grading_systems_by_country)

Table 8

*Grades used for evaluation in the USA, North Macedonia, and Finland*

## Comparing Grades Used in the USA, North Macedonia, and Finland

1	USA	2	MACEDONIA	3	FINLAND
	<ul style="list-style-type: none"> <li>Standards/skills-based (multiple grades per subject)</li> <li>Descriptive narrative comments till the end of elementary years</li> <li>Letter grades start in grade 6, MS</li> </ul>		<ul style="list-style-type: none"> <li>Standards-based, descriptive narrative comments in all elementary years</li> <li>Numeric grades start in grade 6</li> <li>Numeric grades given summatively, one grade per subject (mostly content based)</li> </ul>		<ul style="list-style-type: none"> <li>Standards/skills-based (multiple grades per subject)</li> <li>Descriptive narrative comments till grades 3</li> <li>Numeric grades start in grade 4, upper elementary</li> </ul>

Information in Table 8 from: [The American curriculum \(although a better name would be '50 states 50 curricula'\)](#) | [The Good Schools Guide](#) and [Grading scales in Finland](#) | [Nordic cooperation](#)

As for the grading systems, more or less all three education systems have similar descriptors per achievement level, the difference being the US system uses letter grades, while the RNM and Finland use numeric grades. The narrative descriptive comments are given to report academic progress in lower elementary grades in all of the three countries compared here, and the comments are related to all the national standards. In North Macedonia, the numeric grading starts in grade 6, and the numeric grades are used to mark students' learning outcomes summatively, rather than skills-based (only one grade per subject, and it reflects mostly the content knowledge of the textbook). Same as in North Macedonia, the letter grades for American students start in grade 6 i.e. the first year of middle school, but the US system supports standards-based grades, a grade per one standard/skill similar to assessments in Finland. On the other hand, due to some recent changes in grading policy in Finland, the numeric grades in report cards are given to students in grade 4 (still standards-based like in the USA, therefore a student can have 4 different grades per subject, depending on the skills/standards). What is most important here is how the assessment process happens within these systems throughout the instruction and learning process. Once again, Finland takes the lead because of the advanced ATT and ATL skills focusing on academic learning and the well-being of each child through standards/criteria-based grades and consistent feedback for improvement. The USA comes second, due to the shift to standards-based grading, and North Macedonia last because there is still only one summative grade per subject, rather than per standard/skill.

5.3.1 What is the ranking of these three countries according to the PISA 2018 average results for math, reading, and science?

Answer: USA 27th, North Macedonia 67th, and Finland 7th.

PISA is the OECD's Programme for International Student Assessment. PISA measures 15-year-olds' ability to use their reading, mathematics, and science knowledge and skills to meet real-life challenges (79 countries were involved). It is important to consider that PISA test questions assess real-world problem-solving abilities and knowledge rather than memorization of information, so higher-level thinking on the Bloom Taxonomy (Armstrong, Patricia. "Bloom's Taxonomy | Center for Teaching | Vanderbilt University." ). Researchers have determined that PISA is one of the markers of how well school systems are preparing students for the global information economy of the twenty-first century because a high PISA ranking is correlated with economic success. With a total average score of 1,485, just slightly higher than the 1,465 average scores for all OECD countries evaluated, the United States only managed to claim 21st place, Finland 7th, and North Macedonia 67th ("PISA Scores by Country 2022." *World Population Review* and "PISA 2018 Worldwide Ranking – average score of mathematics, science, and reading." ; Walker, Tim. "PISA 2018: Slight U.S. Progress, But What Do The Results Really Tell Us? NEA." *National Education Association*). In addition, a lot of the top-performing nations, including Finland in particular, prioritize investment in the teaching profession and have rejected the privatization agenda that has weakened public schools in the US and some other countries like North Macedonia. North Macedonia was in 67th place in 2015 and 2018, which showed no progress and real change in improving the education system, thus boosting students' learning outcomes and scores. The Republic of North Macedonia has improved institutional capacity and increased educational access in recent years. However, despite these advancements, there has been no growth in student learning outcomes, the most crucial indicator of an educational system's quality. Learning results in North Macedonia are worse than the norm for the area and the world, according to data from the OECD Programme for International Student Assessment (PISA), and they are not improving. PISA-2022 will start this October and the results of PISA-2022 will be presented to the world community in December 2023.

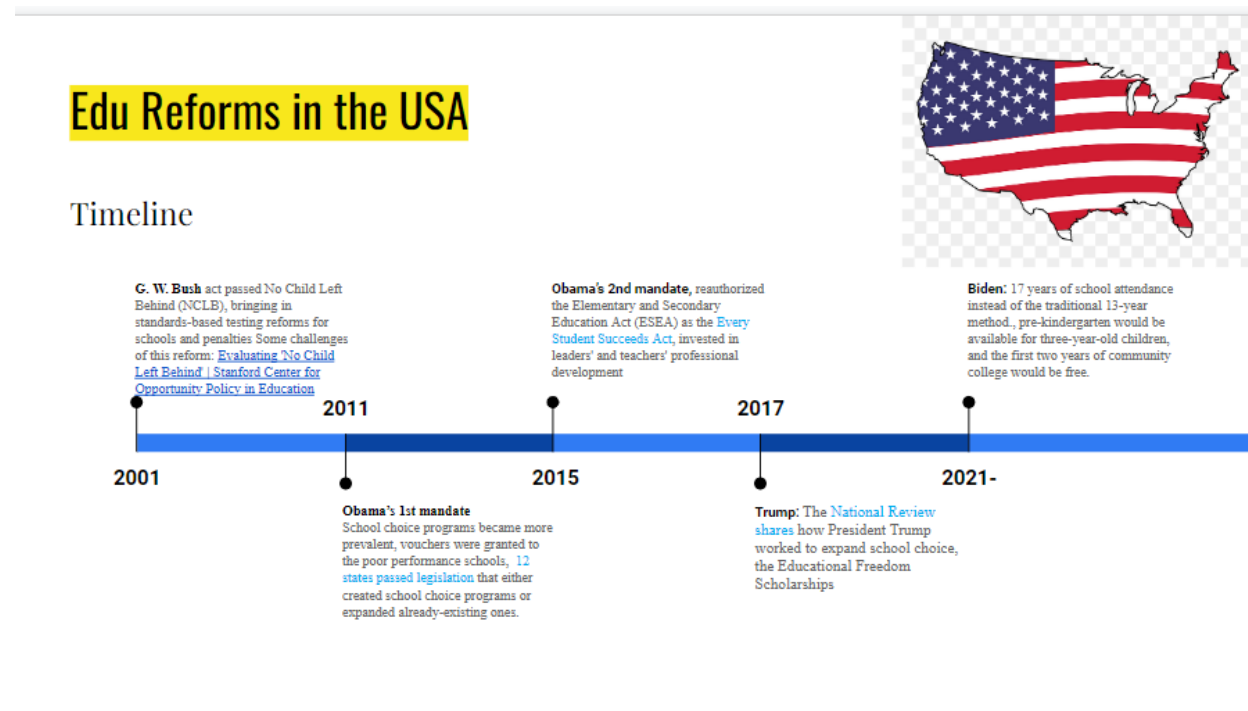
5.4 What are some important reforms of these three education systems in the 21st century?

What were the most important 21st-century educational reforms in the USA?

The US education system has been reforming for two decades now, similar to the North Macedonian education system. The main difference between the USA and the RNM reforms is that each president and government in the US worked on a common national goal to improve the education system. The big reform started with uniting the states by bringing common core standards and standardized tests for accountability of each school, but penalties as well (NCLB). Education shifted to standard-based grading and project-based learning through research, although there is still work to be done to improve the quality of education in each state, and of course, equality and equity.

Table 9

## Timeline of reforms in the US education system 2000-Present



Information in Table 9 from:

<https://noahwebstereducationalfoundation.org/americas-education-timeline/>

What have been the most important reforms in the Macedonian education system since its independence?

A lot of work was put into harmonizing and adapting the Macedonian education system to the norms that apply in EU nations. The state has implemented numerous initiatives during the past two decades and several types of educational reforms, still, some weaknesses like lack of funding, political corruption in all spheres, evaluation, reflection, poor monitoring, and inconsistency of SMART strategic planning have been prevailing in these reforms and the learning outcomes of Macedonian students is still below those of other nations.

Starting with the different educational concept in 2021, there should be consistency, monitoring, and evaluation of this reform. The most recent step forward is the 2023 practical implementation of the concept-based reform in grade 6 will study the disciplines like history, geography, civics, ethics, religion and culture as one social sciences subject, and natural sciences like biology, chemistry, physics, and physical geography as one subject through meaningful projects, research, thinking and innovating (hopefully).

Table 10

## Timeline of reforms in the N. Macedonian education system from its Independence-Present

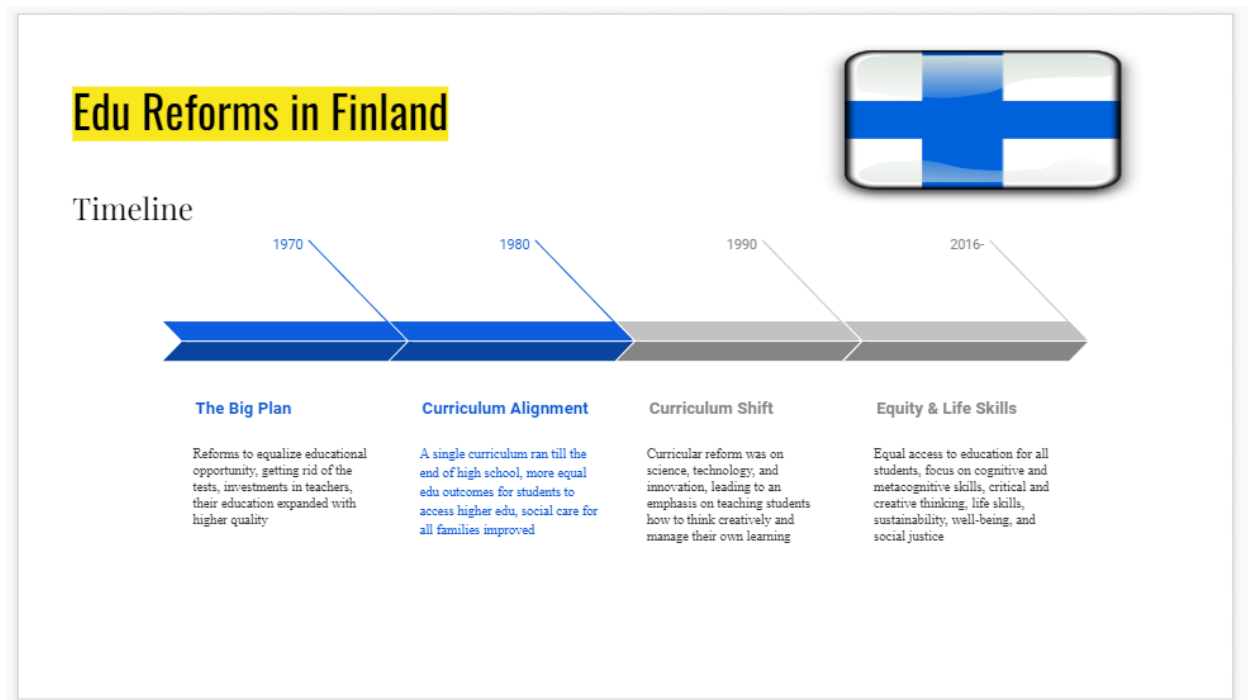


Information on this table from [National reforms in school education | Eurydice](http://periodica.fzf.ukim.edu.mk/) and <http://periodica.fzf.ukim.edu.mk/>

### How did Finland reform its education system?

Well, Rome wasn't built in a day... The Finnish educational system, which we all admire and look upon, transformed in a 50-year period. If we look back in time since 1970, the Finnish government assessed the educational system and introduced better, more progressive, but unproven reforms. From the fundamental early education stage to the higher education level, the entire structure was reconstructed at that time, and it was done so with the goal of giving Finnish students progressively more life skills, equity, equality, and well-being. ICT integration was embedded in all subjects in Finnish education, starting with coding from grade 1. Finland shifted its education away from content knowledge and memorization with repetitive tasks on which it had originally focused before the 1970s, now toward inquiry-based learning and teaching pedagogy, the focus is on deeper conceptual understanding, problem-solving, and creative thinking that leads to innovations (Darling-Hammond, Linda. "What We Can Learn from Finland's Successful School Reform." *Stanford Center for Opportunity Policy in Education*). The government invested in teachers because they empower students and learning. These schools' curricula and pedagogy are very close to the IB (International Baccalaureate) program and philosophy. In 2016, Finland adopted a new core curriculum that involved more life skills, well-being, an interdisciplinary approach to teaching and learning, and civics, not just academics. Therefore there has been a drop from the top to 7th place in PISA 2018, but Finns care more for their youth to be happy and equipped with life skills to achieve welfare and success in their future careers, rather than test scores.

Table 11  
*Timeline of the Finnish education reforms*



Information in Table 11 from [\*What We Can Learn from Finland's Successful School Reform\*](#) | [\*Stanford Center for Opportunity Policy in Education\*](#)

### Conclusion

“It is not the strongest species that survives, nor the most intelligent that survives. It is the one that is the most adaptable to change.”

Charles Darwin

In conclusion, reforms in the education system are always necessary, but it takes time. However, proper management of resources, evaluation, and consistency over time will bring positive results and well-being to all citizens of the society. Moreover, the youth will be equipped with career skills needed for the 21st century and thus be competitive in the global labor market. Both the USA and the Republic of North Macedonia can learn from Finland's model how to make positive and consistent changes in their education systems regarding the educational philosophy, national curriculum and standards, and pedagogy (ATT and ATL). It is crucial to invest in skillful teachers and leaders that can empower all students with 21st-century knowledge, skills, and understanding. There needs to be a growth mindset in both students and adults (parents, educators, leaders/managers, politicians, and all stakeholders), to learn from the world's success stories regarding educational reforms for improvement and a cultural shift

toward skill-based interdisciplinary learning and assessment, including life skills and well-being in all lessons. All the USA's ideas for the interactive, democratic style of teaching, instructional methods focused on skills, and PBL (project-based learning), including technology integration, can serve as a role model for a step forward in the Macedonian education system. On the other hand, the US education system can learn from both Macedonian and Finnish systems how to implement more than one instructional language for better equity and inclusion, and to make foreign language acquisition mandatory in their schools. Additionally, the idea of bilingual schools or schools with the Spanish language as an instructional language could be the USA's next step, as well. Furthermore, both Macedonia and the US should implement this important mission of all Finnish schools of caring for children on an academic and personal level, preparing them not just for future careers, but also be responsible and caring global citizens with international mindedness. This nation has been restructuring education for 50 years now to put more of an emphasis on teaching diverse students higher-order skills like creative and critical thinking through research-based projects where the application of skills is required and connection to the real world. One of the biggest governmental investments in Finland was improving the quality of teacher education. Finland has been preparing teachers for a research-based profession to be capable of modeling this inquiry-based pedagogy with their students. Finland is the best role model of how it is possible to create a system in which students are regularly taught by qualified instructors who collaborate to develop thoughtful, high-quality curricula that are supported by suitable materials, technology, and assessments that promote ongoing learning for teachers and students. At the same time, the emphasis is on academic skills and concepts through practical application, equity and equality, and the well-being of all students and teachers. It is vital that the USA and Macedonia start first by improving their societies and core values that reflect education.

## **Chapter 6: Mission and Vision Statements Mirroring SMART Strategic Planning in Education**

Case Studies: Nova International School of Skopje, Faculty of Economics of Belgrade, Serbia, and the Primary School Jan Amos Komenski, Skopje

### **6.1 What is strategic planning and why is it important for schools?**

A strategic plan is an official document that provides a shared vision and priorities that direct educational development in one school or in the whole education system of a country. Planning for education involves a wide range of actors in defining its future and mobilizing human and material resources to achieve its objectives. It is both visionary and practical since it communicates the school's mission and vision, including the school community's goals, objectives, and shared core values. Additionally, it gives directions to the policy-makers on how to restructure the educational system and offer everyone a high-quality education. The strategic plan is a live document that engages all the internal and external stakeholders and should be

consistently evaluated, revised, monitored, and updated in order to be relevant for further improvements in education. The strategic planning process in education encompasses three main phases (“Creating the Future: Strategic Planning for Schools”):

1. Conducting Research to gather data on the current school reality (interviews, focus groups/stakeholder surveys, student achievement analysis, and other archival data)
2. Developing the Strategic Plan (creating/revising the mission and vision statements, setting strategic SMART goals based on the research results and each goal is further “unpacked” through comprehensive tangible objectives)
3. Developing the Implementation Plan (planning meetings, execution of the strategic plan with the action steps per objective, monitoring via Dashboard)

The Strategic Planning process includes analyzing and interpreting data collected during the Research phase, triangulating this new data with the archival data of the school, then synthesizing all the results and setting SMART goals for further improvements. It also involves creating an annual action plan and managing and mobilizing the human and material resources needed to achieve those goals and objectives. Educational strategic planning goals relate to the shared mission and vision of the school, and the values and core beliefs of the whole school community (“Educational Strategic Planning | IIEP-UNESCO.”).

Moreover, a strategic plan of a school is like a GPS that should provide the correct position “Where are we now?” and the desired direction for the school toward the final destination i.e. the goals and objectives “Where do we want to go, when, and how?”. The school leader is like the captain of the ship wisely navigating their crew through sunny and stormy days, utilizing this powerful strategic tool.

Whenever the Ministry of Education decides on some reforms in education, they should consider creating an organized visionary plan based on the SMART goals. Additionally, this strategic planning should involve other ministries and national and subnational departments to get involved collaboratively in this common national goal. Consistency, patience, and continuity are a must since educational reforms last for years or even decades. Ministries must establish a strategic vision and priorities, coordinate their programs and budgets annually and within a medium-term expenditure framework, bargain with national and international financing agencies, and conduct implementation reviews on a regular basis to ensure that they are on track to meet policy objectives.

#### 6.1.1 Why is it important to use SWOT analysis in order to initiate meaningful change in education?

The acronym SWOT stands for: Strengths, Weaknesses, Opportunities, and Threats. A SWOT analysis is an important method that is used to evaluate, reflect and diagnose the school’s current standpoint and can be performed with a number of school stakeholders (parents, board members, staff and students, etc.). Strategic planning starts with the self-study phase and research as a metacognitive approach to set further SMART goals. SWOT analysis method considers both internal and external environmental factors and the results are further interpreted for obtaining a detailed picture of the school’s reality.



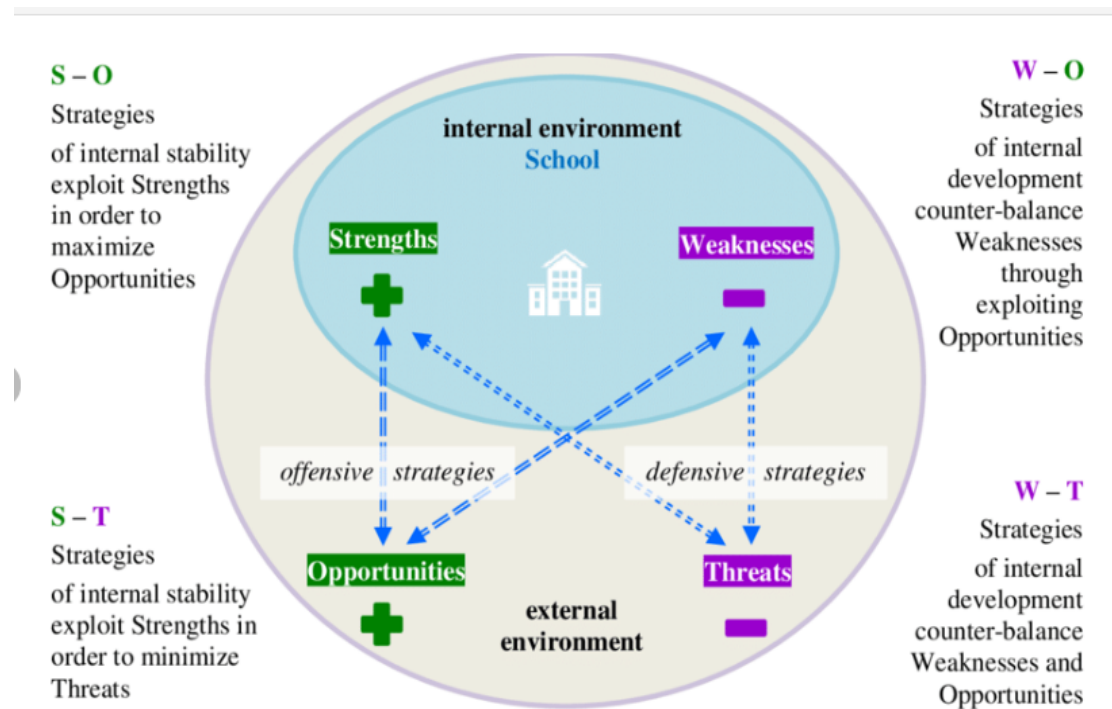
Figure 11 *The School SWOT Matrix*

Image credit:

[https://www.researchgate.net/figure/Explanatory-scheme-for-the-8-boxes-matrix-type-SWOT-Analysis-model-25-SWOT-Analysis-have\\_fig1\\_347542991](https://www.researchgate.net/figure/Explanatory-scheme-for-the-8-boxes-matrix-type-SWOT-Analysis-model-25-SWOT-Analysis-have_fig1_347542991)

### 6.1.2 What are SMART goals?

SMART goals were developed by George Doran, Arthur Miller, and James Cunningham in their 1981 article “There’s a S.M.A.R.T. way to write management goals and objectives”. Every educational organization should develop a SMART plan for improvement. The SMART acronym refers to goals that are Specific, Measurable, Attainable, Realistic, and Timely and it is crucial that all goals for educational development are set in this manner in order to be accountable and measurable (“A Simple 6 Step Process For Setting Smart Goals (With Examples!)”).

Figure 12 *SMART Goal*



Image credit: <https://professionalleadershipinstitute.com/resources/smart-goal/>

### 6.1.3. Why are Mission and Vision statements vital for effective Strategic Planning?

Mission and Vision are strategic documents of the school to emphasize the school philosophy, core values, school purpose, and top priorities. A school's goals and objectives are outlined in its vision statement, and its mission statement summarizes how it plans to get there. School vision and mission statements make the values of the school clear to the public. They are like agreements between the school and all the stakeholders. School mission and vision should be the first thing you see on all schools' websites visible in the school's hallways, offices, and classrooms since they represent what that school stands for and believes in, the core and heart of the school (Allen and Kern, "School vision and mission statements should not be dismissed as empty words." *The Conversation*). On the other hand, despite their benefits, mission and vision statements are also frequently criticized by many. They might be there "on paper" for marketing purposes which may seem catchy and competitive on the market but have little bearing on how the school functions in reality. It's possible that employees are even unaware of or unconcerned with the statement's contents. This could indicate a gap between what is actually happening in the school and the defined values. Therefore, this kind of school with a dated and "irrelevant" mission and vision will not achieve its goals and objectives for improvement and will never become a high-quality educational environment for students. Mission and vision statements should articulate transparently the direction of the school and its core values and beliefs, mirroring the strategic plan.

## 6.2 Case Study 1: How are the mission and vision of Nova IS of Skopje in alignment with the current strategic plan?

The participant in Interview 1, is the secondary school (SS) division principal of Nova International School of Skopje. This school has recently been accredited by the International Baccalaureate authorization team and is currently preparing for the upcoming MSA-CESS (Middle States Association-Commissions on Elementary and Secondary Schools <https://www.msa-cess.org/>) re-accreditation in 2024.

According to this SS principal, the international accreditation aspects of both IB and MSA are taken into account when creating a strategic plan. To that end, there are two current plans, one school-wide, 5-7 year strategic plan that involves all Nova school divisions (PYP, MYP, and DP) set by the senior leadership and the advisory board, and then reviewed by an external consultant. The second strategic plan involves the secondary school division which looks closely at the 5-7 school-wide strategic plan, especially the action plans embedded in the re-accreditation goals for the programs the division supports (MYP and DP). For this strategic plan to be shared with the wider Nova community, it needs to be inclusive. The Parent-Teacher Association (PTA) regular meetings include the external stakeholders of parents/guardians where the school's objectives and goals are communicated. Prior to the recent IB MYP accreditation in May 2022, the school's priorities were horizontal and vertical alignment for K-12 curricula across all subject areas since there were some existing gaps in students' learning. As every SMART goal for school improvement starts with self-evaluation, this was confirmed by this participant's statement "The MSA (re)accreditation process provided us with a key opportunity to take a closer look at our action plans and reassesses what our ultimate goals were in regard to the standards we built our units of study around, how they trickled throughout the PK-12 continuum, and ultimately, what meaningful assessment should entail." Furthermore, after the IB MYP accreditation success in May 2022, the school plans to develop the standardization and moderation to the proficiency level for all NOVA educators and the IB MYP approaches to learning (ATL skills) for all NOVA students since these are vital tools for inquiry-based learning. On the DP side, the goal is to retain the number of students within this program and to prepare these students to meet the university requirements.

At the present, Nova IS is in the process of preparing for the MSA re-accreditation in 2024. The previous report by MSA helped this school with its SWOT analysis and setting SMART goals for further school development. Currently, Nova IS is considering the Organizational Committee with stakeholder representation from the entire PK-12 continuum for revisiting the key outcomes of the existing action plans and providing suggestions for the next 7-year cycle (new action plans). The school will work closely with the SAGE consulting team to create a next five-year strategic plan and revise the current mission and vision statements accordingly.

Furthermore, a recently shared community message (December 2, 2022) by the director of Nova IS, mirrors what the SS principal explained in her answers to the

interview question regarding the current strategic planning of this school. The director emphasizes the importance for the school to maintain the quality of education for the benefit of all students and to build a new strategic plan for improvement based on the school's self-study aka self-evaluation in regard to the upcoming MSA-CESS re-accreditation, which is to be finalized in 2024. The following communication (December 16, 2022) by the Nova IS school director with the community, announces the development of the next 5-year strategic plan and the inclusion of representatives from internal and external stakeholders i.e. students, parents, and staff members in this important strategic planning process.

Nova IS is currently working on gathering important data via interviews and some surveys sent to all stakeholders so that the results are analyzed and utilized for the self-study phase. The MSA re-accreditation committee at Nova IS is inclusive and consists of representatives from all stakeholders like the school director, principals, educational leaders, curriculum coordinators, teachers, counselors, students, and parents. The committee members are meeting monthly to discuss, plan, and collaborate as a team in order to make further decisions for the next steps and proposed suggestions for the revision of the mission and vision statements based on the stakeholder feedback. In collaboration with the SAGE consultants, the next- five-year strategic plan and the new mission and vision statements are officially shared with the whole Nova community on Monday, October 2, 2023. It is obvious that this school follows the global trends of education about holistic teaching and learning, and the mission and vision statements embed academic, life skills, citizenship, and well-being themes.

*Mission: We nurture learners as balanced, informed, and empathetic thinkers to embrace their full potential.*

*Vision: Nova aspires to be a forward thinking community that is learner-centered and embraces diversity and sustainability in an ever-changing world.*

In conclusion, Nova IS strategic planning process follows all three main phases taking into consideration the self-reflection through SWOT analysis, setting SMART goals for school improvement, and the recommendations for school development provided by the IB accreditation and MSA reports. The mission and vision of this school reflect the objectives of the SMART goals for school improvement from the current strategic plan, articulating the desired direction and core values and beliefs of NOVA International School of Skopje. The designing of the next 5-year strategic plan with the new SMART goals for improvement might result in the further revision of this school's mission and vision, thus emphasizing the importance of competent and dedicated strategic and transformational educational leaders and their collaborative teams.

6.3 Case Study 2: What are the mission and vision statements of the Macedonian primary public school “Jan Amos Komenski”, Skopje? To what extent are they shared with the community and are they in alignment with the strategic plan?

The participant in Interview 2, is the principal of the local public primary school “J.A. Komenski” in the municipality of Karpos. This school has recently shared its mission and vision

statements with the school community and all of its stakeholders during the parent-teacher conferences. According to the principal, the strategic planning goals emerge directly from the internal self-study process and results. Every second year, the planning committee of this school considers and evaluates the seven fields of the educational process in alignment with the success indicators of the Ministry of Education of the Republic of North Macedonia. This planning committee includes representatives of the internal and external stakeholders of this school (teachers, administrators, parents, and students) who focus on the strengths and weaknesses of the school's current standpoint, then the detailed report is prepared. This report should be approved by the Board of Education and Municipality of Karpos, and additional suggestions for further improvement are considered when creating the SMART goals for the strategic plan (the timeframe of the current strategic plan is August 2023). Additionally, this participant claims that the Mission and Vision statements are in alignment with the goals of the strategic plan, publicly shared with the community on the webpage, brochures, and school hallways, and the school revises them every four years accordingly. Every three years, this school's progress is externally evaluated by The State Educational Inspectorate. The school leadership plans several professional development sessions for all teachers in order to successfully accomplish the school's strategic goals and objectives, for example, training all faculty members for developing skills and competencies needed for a 21st-century education, Social-Emotional learning, and prevention of any type of bullying in schools. The participant adds that the faculty members are highly educated and trained to stimulate students to think critically and creatively during classes and work on different projects. Many of their students with subject mentor teachers have participated and been rewarded in academic competitions on the municipality and state levels, including two projects by the Innovation and Development Fund of the RNM. In addition to academics, the students are encouraged and guided to participate in many extracurricular activities and community service projects to make positive changes in society (social activism). She further explains that a group of students from this school was the winner of the prestigious award for organizing An Open Day for Civic Education from the Bureau of Educational Development of the RNM. Even though it was still a COVID-19 pandemic setting, the school organized an online event where students promoted a manual for distance learning mode, designed by students in collaboration with their mentor teachers and professional associates. This school is one good example of how to set strategic goals based on self-reflection and work hard to achieve those. In fact, there is still a long journey to be taken, since the whole Macedonian education system needs a complete transformation, a shift of the pedagogy and learning methods towards the 21st-century model.

To conclude, all educational organizations should regularly review their mission and vision statements to make sure they still meet the needs of the students as their priority. Furthermore, the mission and vision must be developed together with the school administration, parents, teachers, and in fact, all the stakeholders. Something that people participated in creating will have their support and commitment increased and the school will truly benefit from the mission and vision statements. Furthermore, schools should be accountable for their public statements because many families choose schools for their children based on their own beliefs and values in alignment with the school's mission and vision. Mission and Vision are the heart and mind of the school.

#### 6.4. Case Study 3: In what ways do the mission and vision statements of the Faculty of Economics of Belgrade reflect their strategic plan?

Considering the fact that one of the Serbian State Faculties, the Faculty of Economics in Belgrade, was internationally accredited by the EFMD Programme Accreditation and currently working on a plan to obtain the prestigious accreditation AACSB Accreditation, can serve as a regional Balkan role model for all public universities and other educational organizations how SMART strategic planning, consistency, and hard work can lead to global success.

The participant in Interview 3, is the Vice Dean of this faculty, a well-respected and dedicated professor who has always been ranked at the top according to students' surveys . According to him, strategic planning is a crucial process in order to set goals for the improvement of education in the institution. Their strategic plan process consists of three steps: strategic analysis, strategic choice, and strategic implementation (all three necessary phases). The strategic analysis assumes macro, industry, and internal analysis which gives a detailed overview of critical trends in their environment. The strategic choice step comprises several parts: vision and mission definition, strategic mapping, critical success factoring, and preparing a detailed balanced scorecard with objectives, key performance indicators, tasks, and initiatives. After the adoption of the strategic plan, this participant claims, it is important that they closely monitor the progress of implementation through a predefined package of strategic reports. Furthermore, the participant lists some of the necessary factors to consider when planning strategically and setting goals as a high-quality educational organization. According this professor, the important factors for them to consider are the relevant macro trends in the Serbian education system, demographic trends, competitive dynamics, the strengths and weaknesses of this faculty of Economics, their core competencies, the current structure of the academic programs, the structure of the faculty and staff, the attitude of their enrolled students, internal statistics related to passthrough and drop out rates, etc. This educational institution includes all the internal and external stakeholders (faculty staff, students, the Dean's office, and employers) in the strategic planning process. The Vice Dean continues, during this transparent process of strategic planning, depending on a strategic initiative, they have an open channel for the stakeholders to propose goals, tasks, and initiatives. In addition, he states that their current strategic plan with the priority to obtain the AACSB accreditation for their educational organization is in alignment with all the goals set for 2025.

The main strategic goals in their current strategic plan are

- Development of academic programs with the student in the center

- Research excellence
- Cooperation with a corporate world
- Internationalization
- Long-term financial sustainability
- Modern infrastructure
- Efficient organization

Once more, the Vice Dean, as a successful educational leader in higher education, emphasizes that the mission and vision of the Faculty of Economics of Belgrade are an integral part of their current strategic plan toward 2025, shared publicly with the whole community. This faculty could serve as a role model for many regional higher-education organizations on how to ensure quality of education that is internationally recognized.

#### 6.5 To what extent should Ministries of Education be accountable for what they are sharing via Mission and Vision statements?

##### 6.5.1 How do the mission and vision of Singapore's Ministry of Education communicate the national educational goals?

Singapore has been the country with the leading education system for years and has always been among the top ones on the PISA scores ranking. They plan wisely and accordingly to set SMART goals in order to improve their education in all schools through a thorough strategic plan. The mission and vision statements embed the goals and objectives of the strategic plan and are publicly shared with the nation on the main web page. The main theme of their mission and vision is Thinking. This is a crucial 21st-century learning skill and essential for the youth to develop into critical, creative, and reflective thinkers. TSLN (Thinking Schools, Learning Nation) was announced as Singapore's vision and the main objective for education in 1997, by then Prime Minister Goh Chok Tong. These Thinking schools will foster thinking skills in young adults, shaping them into lifelong learners who will make positive changes to the nation and Singaporean society. All of these objectives in the vision, align with the "how" they will do it, the mission statement: "To mold the future of our nation, by molding the people who will determine our future." So their people are their focus, to invest, to mold and shape their citizens into lifelong thinkers conscious of their responsibilities to family, community, and country.

##### 6.5.2 What is the current strategic plan of the Finnish Ministry of Education and Culture?

Finland's education system is one of the most successful models that was reformed over a five-decade time period. The core of Finnish education is students' well-being and academic progress. Behind each successful educational reform, there is a process of SWOT analysis, setting SMART goals, consistent effort over time, reflection for next action steps, etc. Finland's Ministry of Education and Culture oversees the K–12 curriculum reform cycle. Over 100 classroom teachers in addition to governmental and university education professionals



participated in the 2015 reform of the national Finnish curriculum to build a SMART strategic plan for improvement. The "growth of the student as a human being and as a citizen" is at the heart of Finland's new vision for student learning. The transversal skills for all subject areas and the interdisciplinary approach to teaching and learning are fundamental to this central focus ("Finnish Education in the 21st Century: Paradoxes and Visions).

Moreover, The Ministry of Education and Culture's authorities have reviewed their perspective for the strategic plan through 2030. It outlines the topics that the Ministry, its agencies, and each department of the government should focus on. The strategy's main takeaway is that the Ministry of Culture and Education and its agencies would be in charge of ensuring that society's cultural and educational foundations are solid. Early childhood education and care, education, science, art, culture, sports, and youth work all have a fundamental impact on the development and promotion of education and culture, which in turn helps to revitalize society. The strategy outlines three impact objectives as well as their relative importance. The Ministry's objectives are to empower everyone to have better skills, knowledge, and competence and to take creative, inquiry-based, responsible action that can transform society for better equality and equity. To reach these strategic SMART goals, the Ministry of Education seeks to act transparently and responsibly and strives to build trust (*The Ministry of Education and Culture, Finland - OKM*). All schools in Finland are equally good, all students have equal access to high-quality education. The Ministry's vision is shared with the mission and vision statements of all public schools in Finland that have the students' life skills, academic learning, and well-being as the core.

#### 6.5.3 What are the mission and vision themes of the secondary schools in Victoria, Australia?

Research shows that 88% of the secondary schools (308 schools were involved) in Victoria, Australia have academics (learning outcomes) as the priority in their mission and vision statements. Other themes also appeared in these schools' statements to prove that academic success was not the only priority for high-quality education. Additionally, promoting good mental health/well-being was referenced by 66.2% of schools, and school belonging was mentioned by 57.5%. Study shows that the inclusion of non-academic themes like well-being and belonging to the school community together with the academic ones demonstrated better academic achievements in those schools. Nevertheless, 34% of schools made no mention of promoting mental health. According to the OECD and top academics in the field, schools currently place too much emphasis on academic achievement, which is detrimental to students' mental health and overall development.

The mission and vision are posted on the main governmental webpage of the Department of Education and Training. They communicate the priorities and goals for educational reforms in this Australian state, like Victorians to reach their potential, regardless of their background, and to develop the knowledge, skills, and competencies they need to participate and thrive in a complex economy and society. ("Our work, vision, and values: Department of Education and Training." *Victorian Government* ).

It is evident that this shift in education toward equality and equity for all participants in the learning process in Victoria, Australia also includes life skills and well-being besides

the academic outcomes as goals, ensures high-quality education for all citizens, and is very similar to the Finnish model which is globally acknowledged as one of the best.

#### 6.5.4 What are the mission and vision statements of the Ministry of Education of North Macedonia? Is the national strategic plan in alignment with the reality in approaches to teaching and learning in the public schools in North Macedonia?

The mission and vision statements of the Ministry of Education of North Macedonia are publicly communicated to the nation through the main web page. The themes used here are in alignment with the desired 21st-century education and reflect the skill set needed for the youth to be prepared for future careers and the complexities of the modern world. One would think these are almost perfect since they match the modern trends of education and include lifelong learning, research, critical and creative thinking, skills-based education, and student-centered learning with real-world connections in all subjects. In comparison to the Finnish and Victorian statements, Macedonian objectives embedded in the mission and vision don't include the themes of well-being and global citizenship.

The question is, do these mission and vision statements reflect the reality in Macedonian public schools? No, not yet. Unfortunately, Macedonian education needs an urgent shift toward what is "promised" by the mission statement: student-centered education, lifelong learning with real-world connections and skills application, and critical and creative thinking. The approaches to teaching and learning in all public schools are content memorization-based, factual knowledge with some skills application but the only source used is the subject textbook hence the content-based assessment, a summative grade per subject reflecting the factual knowledge. There is an obvious gap, a discrepancy between the mission and vision statements of the Ministry of Education of Macedonia and the cruel reality of the "old way" of teaching and learning still happening in public schools, with some rare attempts by some teachers to change their pedagogy. In this survey, the focus group was seven participants, parents, whose children attend public schools in North Macedonia. According to all of them, the purpose of education is to prepare children for real life, applying critical and creative thinking skills, collaboration, and communication skills within larger groups, developing children into lifelong learners.

According to the participants in the survey, the positive side of Macedonian education is that it is free till finishing the compulsory high school education, the school is like a reflection of "real life and society" where students can naturally develop life skills and conflict-resolution skills on their own, rather than bubble created for the students in the private schools in Macedonia. Additionally, some positive examples of dedicated and caring teachers and educational leaders have a great impact on children's development. On the contrary, the biggest issues in Macedonian education according to these 7 families, that in discrepancy with the Ministry's Mission and Vision, are: learning focused on content, not on skills, inflation of grades, dated programs/textbooks, a poor system for teachers' evaluation, multiple problems on all levels, top-down like lack of responsibility on the principal level, and finally, an unfair selection of teachers and principals, mostly based on their political orientation. Furthermore, according to these 7 participants, the most urgent changes needed in Macedonian education are: to exclude political corruption in education, employ high-quality teachers and elect experienced and skillful educators for principals, longer school days and better organization, provide better resources besides the textbooks, focus on skills application, critical and creative thinking (innovation) through inquiry, raise teachers' salaries, improve hygiene in all schools, improve collaboration

and communication among teachers, and between the school with parents (not only during the parent-teacher conferences general discussion about the whole class, rather than focusing on each student's progress), develop a better skills/criteria-based grading for students and adequate evaluation for the teachers and their approaches to teaching and learning.

Evidently, it is crucial that the Ministry of Education of the Republic of North Macedonia work "harder" for the common national goal-improving education system, following all the objectives shared through the mission and vision statement, they just sound wonderful and trendy.

### Conclusion

In conclusion, the importance of SMART strategic planning in education is crucial to guide schools toward improvements in both teaching and learning, preparing students for their future careers to be competitive in the global labor market. Research shows that 56% of current students in North Macedonia are not prepared for 21st-century careers in the competitive global labor market. It is vital that every Ministry of Education plans SMART reforms based on the honest SWOT analysis reflection, then creates a strategic plan with shared values and objectives through mission and vision. The ultimate common goal of all educational operating systems should be improving academic learning outcomes and well-being as these research results confirm. The most successful systems include the themes of improving academics, well-being, life skills, ICT integration, international mindedness, global citizenship, inclusion, equality, equity, etc. Not all high-quality education institutions have well-being in their mission and vision statements, but Finland, most of the IB schools, and Victoria, Australia do. Furthermore, internationally accredited schools/institutions like Nova IS (IB and MSA accredited) and Faculty of Economics of Belgrade (EFMD accredited, AACSB pending) have built strategic plans communicated via their mission and vision statements and are aligned with the reality of their education. They are evaluated by the external international authorization teams, not just national, and are not prone to political corruption. Moreover, their shared mission and vision must reflect reality and achieve the objectives needed for international glory.

One spark of hope for North Macedonian smart educational reforms is some of the local schools, like for example the primary school "J.A. Komenski", Skopje. Hopefully, this positive example and enthusiasm of the principal and faculty members for reforming and transforming the approaches to teaching and learning will continue in this public school and will shift completely the education and learning style to research and inquiry in alignment with the strategic plan and the Ministry of Education goals, rather than content memorization from the textbooks.

It is vital that all the educational organizations in North Macedonia be in alignment with the national mission and vision for education published on the main governmental webpage. All schools should build and publish their own inclusive strategic plans with transparently articulated mission and vision statements with the community and all stakeholders. Strategic planning for reforming and improving the quality of education in one country is vital for prosperity, welfare, and a better future for all citizens. Therefore, all the ministers of education and all the educational leaders in the Republic of North Macedonia should research the best examples in the world and can use the results of this inquiry to make good reforms based on SMART strategic planning and consistently work hard and wisely toward this important national goal of improving education.

## Chapter 7: Conclusion and Recommendation

### 7.1 Conclusion

In conclusion, all the research results of the thesis are in support of the main hypothesis: *IB MYP learning and teaching philosophy is crucial for 21st-century education since it focuses on both academic and life skills, and prepares students for the demands of the global labor market and life, therefore leading and managing MYP teams effectively leads to better educational outcomes.* Each of the thesis' chapter refer to the sub hypotheses with posing adequate inquiries and providing research evidence and case studies samples. The data collected in this study confirms the following Sub Hypotheses:

1. *IB MYP contributes to better learning outcomes and global citizenship.*
2. *MYP ATT and ATL skills are focused on developing collaboration, communication, and thinking skills through inquiry-led/research-based assignments oftentimes interdisciplinary (real-world skills application-21st-century skills).*
3. *Leading and managing MYP operating/edu teams via democratic leadership is more effective in achieving the strategic goals for improvement.*

In order to reform and transform education, competent and empathetic 21st-century democratic leaders are required to lead and manage collaborative teams toward common strategic goals. This educational leaders should have growth mindset and role model the lifelong learning to others and all together walk the way towards the objectives of the action plan. SMART strategic planning is vital since ensures the right direction of the school and further improvements in education. The mission and vision statements should be created inclusively by all the internal and external stakeholders of the educational organization based on the core values and beliefs, including the strategic goals of that school, then shared publicly on organization's websites to communicate the goals and objectives of the school with all stakeholders. Research suggests that these should include both academic and non-academic themes like citizenship, international mindedness, well-being, empathy and compassion, etc for better educational outcomes and shaping balanced responsible citizens. Furthermore, the learning and teaching should follow the global educational trends and careers and be shifted toward inquiry-based learning and focused on higher-level skills in Bloom's Taxonomy like critical and creative thinking, including reflective skills for setting goals for improvement. Moreover, the assessments should be criteria/standards-based, reflect progress and provide important information to students, parents, and teachers where the student is currently on the continuum of learning, and provide constructive feedback with concrete suggestion for further improvement and growth. Unfortunately, the education in Macedonia is still often stuck on the basic level of content memorization from textbooks and factual understanding through frontal teaching method, the bottom of Bloom's Taxonomy Pyramid since students during classes rarely apply and practice

the skills of self-management, critical and creative thinkers and inquirers who collaborate and communicate in teams, building consensus to find the best solutions of the problems given and to “think out of the box” when synthesizing the final product. As this research shows, these skills are crucial for 21st-century student-centered learning environment where students are empowered to own their learning process, practice necessary academic and life skills, and make connections to real-life careers, issues, and scenarios. Both cognition and metacognition play an important part in the learning process and should be emphasized equally through the methods of teaching and learning in all subjects. Not solely students, but it is crucial that all educators and educational leaders (including ministers and policymakers) possess, apply, and consistently model these ATL skills of self-management, organization, communication, collaboration, critical and creative thinking, and reflection on a daily basis. My hope is that very soon, in the RNM, all the students and educators would start the process of Zen “awakening” by becoming aware of what they learn, how they learn, and why they need these skills and knowledge for their real life, by implementing the ATL skills in all classrooms on daily basis. However, be mindful that Satori (悟り Zen Buddhism) does not happen in a day, it takes time to evolve and revolve, with all citizens and politicians working together towards a common national goal of enlightenment. So, consistency, monitoring, and patience are a must to achieve the Nirvana of the positive education reforms.

## 7.2 Recommendations and real-life application of this MA thesis

### 7.2.1 Recommendations for the Ministry of Education and Science of North Macedonia

Let us start with this simple inquiry: Why there is no “growth” in the students’ learning outcomes with so many attempts at reforms in the Republic of North Macedonia?

The research-based answer here would be that the Republic of North Macedonia did not restructure its education system using an integrated strategy and consistency. The majority of interventions were restricted to certain areas (e.g., teacher training, level-specific curriculum development, giving schools computers but not controlling, partially evaluating the process of education and digitalization, etc). The interventions in primary education were made without linking to or coordinating with preschool or secondary education, nor with higher. The proposed VET (vocational education and training) reforms were implemented without coordinating with primary and higher education. For sure, there have been a number of good initiatives that could lead to positive outcomes but failed to be sustained since they usually stopped once the political party or the Minister of Education changed.

The simple proposal will be: Learn from the best, in this case, based on this thesis’ results, I recommend the concept-based curriculum like the IB educational framework and philosophy similar to the Finnish education system model. On the other hand, I would not recommend simply copy-paste the IB or Finnish model, but adapt this framework and practices to Macedonian reality and culture promoting positive change adequately and consistently on all three levels of education structure (primary, secondary, and tertiary). Moreover, it can be a

combination of successful characteristics of several education systems with a strong will to transform systematically. The respected Ministry should start with a SWOT analysis, be realistic, set SMART goals and be consistent and dedicated to succeed for the common good. One step further would be to invest in high-quality and skillful teachers and assign capable educational leaders and school principals who are experienced, knowledgeable, hard-working, and caring to improve the learning outcomes, approaches to teaching, ICT integration, and curriculum. Furthermore, additional funding must be found to proceed with high-quality reforms in education, these funds must be managed wisely, managerial employees must receive dynamic training, and all educators must participate in regular workshops, PLC, and professional development to ensure quality and credentials. It is crucial to ensure and achieve political unity with the same national goal of improving education in this country. So fingers crossed for "Wind of Change " (Scorpions, November 1991) in Macedonian education soon.

#### 7.2.2 Recommendations for all the educational leaders in the RNM

In what ways can the school principals contribute to the positive changes in the education system of North Macedonia?

Everything is interconnected and intertwined in the world, so what is proposed by the mission and vision statements from the top of the country, should be followed all the way down to all the operating units of education. On the other hand, what each individual educator or educational leader does, just like a ripple effect, spreads across the all pores of society and affects the future of all children. Therefore, only knowledgeable, experienced, and enthusiastic educators with a growth mindset, integrity, and empathy should be considered candidates for school principals and leaders who would further employ dedicated and open-minded teachers. The principal should reflect and act accordingly, be there in every classroom to support the teachers, guide them with constructive feedback, and show them how to improve teaching with experience anecdotes, lesson planning, or co-teaching. Furthermore, consistency is vital, as regular evaluation, setting individual goals for improvements, then application and hard work towards the set goals. Regular professional development of staff and PLC time is required to empower all teachers with the skill set needed for 21st-century education. So far with the results of this whole investigation, it is obvious that all school subjects should be connected and overlap in more of an interdisciplinary approach to teaching and learning, and therefore, collaboration and communication among all the educators are necessary, to work together as a team towards improving learning outcomes. Each educator should ignite the curiosity for learning, shift towards inquiry-based learning methods of teaching, and promote and model research skills and critical and creative thinking in students. The reforms of the educational programs should be implemented in practice and teaching should focus on concepts and skills, teaching the "whole child", and preparing students for real life. Furthermore, PBL (project-based learning) and the integration of two or more subjects when studying some topics and concepts are crucial and help boost students' understanding and skills. The most recent change in Macedonian education with conceptual and transdisciplinary approach for Natural Science and Social Sciences is a positive step forward, yet, should be consistent, closely monitored, and evaluated.

For the sake of equity, inclusion and differentiation should be considered in all the classes and the whole grading system should be shifted towards criteria and standards-based assessment. I hope soon, I and all the citizens of North Macedonia, will witness some positive changes in the education system of our home country, and “the wind of change” in education will “blow straight into the light” (Scorpions, 1990).

“Education is the most powerful weapon which you can use to change the world.”  
Nelson Mandela

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