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Foreword

The authors of this book do not work at a faculty of sport, but are instead based at a faculty of social, technical and information sciences. They include: the former and present dean, the former and present vice dean of education, and a doctoral student who is also a former elite athlete.

During the many decades of its existence, a number of elite athletes studied at our faculty: national representatives from various sport branches and several national, European, and world champions in various disciplines. The book in front of you was written at a faculty whose students won as many as four Olympic medals at the 2014 Sochi Olympic Games.

Many of these students went on to graduate, but unfortunately, some of them never completed their studies. We were excited about all our students who graduated; we were equally perplexed by our students who did not make it: what went wrong? To resolve the problem of early school leaving, it is important to work as a team. If there are ten exams required to enrol into the next year of study, it is, of course, not enough for a student to pass only nine. They need to successfully pass all ten. Years of experience have shown us that in general student athletes successfully complete most of their exams, with only a few exams presenting difficulties.

If education was an industry, all students would graduate—however, it is not. Each student is an individual, especially in the case of elite athletes, which is why teaching is an art. A professor teaching elite student athletes needs to possess a special skill, i.e. they need to be able to motivate them. Despite this necessarily individual approach, working with elite athletes should also be based on systemic thinking and methodology.

The present book highlights some of the aspects which need to be taken into account when working with athletes: systemic measures on the state level, the role of educational institutions and their evaluation, the students' motivation, the role of e-learning in supporting elite athletes, and the effect of curriculum adaptations on overall academic success.

The first chapter presents developments in the area of dual career of athletes whose first model was created in the years 2003 and 2004. It begins by explaining the notion of dual career and then summarises the EU recommendations on dual careers. Finally, it presents the relevant regulatory framework in the Republic of Slovenia and shows examples of good practice in Slovenia.

The first chapter is followed by an overview of various approaches towards evaluations and assessment. Over the last decade, the authors of the book have been involved in the process of evaluation in various roles: self-evaluations,

evaluations by the Slovenian Quality Assurance Agency for Higher Education, international evaluations and assessing business excellence based on the EFQM model. Each evaluation was followed by a critical analysis, which identified positive and negative aspects of our work and opportunities for improvement; evaluations thus contributed to quality improvement. Evaluations are a necessary part of achieving athlete friendly education. The second chapter presents various evaluation approaches, with a model of an evaluation questionnaire for athlete friendly schools attached in the appendix.

The authors firmly believe that e-learning is a key component of successful student athlete education. Our third chapter is thus devoted to the topic of online learning. Since 2010, approximately half of the curriculum at the Faculty of Organisational Sciences has been conducted through e-learning. Furthermore, almost 80% of our study programme dedicated to elite student athletes is realised though e-learning. At the time of its introduction, the author of the chapter was the vice dean of e-learning, which is why they have extensive experience in this field.

Finally, we consider the topic of motivation. The middle of the 20th century saw the rise of theories of motivation and motivating. Abraham Maslow's theory in particular gained widespread recognition. Most theories of motivation and motivating are concerned with the question of how to use external stimulus to prompt a person to execute a task. After 1991, prominence has increasingly been given to the idea of commitment. Commitment includes strength, energy and dedication, all of which are intrinsic to a person. It is self-evident that no learning can be successful without the students' commitment. We are all familiar with the stereotype that student athletes are more interested in sports than in their studies. Our book, however, presents the results of a study which found no differences in the level of commitment to study between student athletes and non-athletes.

The final chapter analyses the education of secondary and tertiary students who are categorised athletes. We were interested in adaptations on the level of specific subjects, as well as on the level of school. The aim of our research was to determine whether adaptations affect overall academic success. Our point of departure on the level of subjects was the idea of curriculum. We found a statistically significant difference between grades achieved by students who used some of the adaptations every day and those who never took advantage of them.

As already mentioned above, working with student athletes is not an industry. Thus our book does not offer magic formulas, since there are no magic formulas for working with student athletes. Rather, it should be seen as a compendium of relevant issues to be mindful of when working with student athletes.

The transition of elite student athletes from a career in sports to professional careers

This section examines the issue of elite athletes' careers. A career denotes an individual's "journey" through various stages and aspects of their lives (usually their professional lives), during which an individual's status may undergo various transformations. A career in sports is characterised by its short duration; however, transitioning from a career in sports into other professions may often prove problematic and present elite athletes with various difficulties. This is primarily due to inadequate education gained during their sports career, which often sees athletes devoting themselves to sports at the expense of their studies; this is further exacerbated by the lower employability of former athletes caused by their lack of training and relatively late entry into the job market. The idea of dual career of athletes was first established and elaborated in the years 2003 and 2004. Lately, the significance of the dual career of (elite) athletes has been recognised and supported by the EU and members of the International Olympic Committee. The dual career of athletes is regulated by guidelines on a European level and by various national legislative frameworks. Slovenia is one of the countries that have already implemented national guidelines on the dual career of athletes. The first, theoretical part of this section explains the notion of dual career and summarises EU guidelines on dual careers. The research section presents the regulatory framework implemented in the Republic of Slovenia and shows examples of good practice in Slovenia, demonstrating the influence and scope of various forms of promotional activities and their effects on elite athletes and the process of implementation of dual career of athletes in practice.

Introduction

An athlete's life consists of practice, travel, hotels, event venues, spectators and competitions. This is also how they are perceived by their social environment. All elite athletes develop their own identities, which are mostly tied to sports. Most of us are thus familiar with globally known sports figures from the past, such as Pele, Muhammad Ali, Diego Maradona, Matti Nykänen, Andre Agassi, and more recently with athletes such as Lionel Messi, Roger Federer and Cristiano Ronaldo. Countries, local environments, towns, and even streets all have their own sports heroes. During their active years, the athletes' local and global environments perceive them primarily through sports, especially their performance in competitions and activities tied to these events. Athletes' achievements in sports affect their income and their social status. But what happens to their identity once their career in sports is over? Practice, travel, hotels and events are replaced by permanent residence; their public is replaced by family. This, of course, is of no concern to the sports public. The public is interested in Hackers Nowadays, millions of people are involved in sports, many of them professionally. Eurostat's definition of employment in sport[1] is based on the statistical definition (sporting activities as an economic sector under the NACE classification). It also introduces the dimension of occupation under the ISCO classification (which includes sport and fitness workers employed outside the sport sector). Employment in sport thus covers employers, employees and self-employed people in three types of situation:

1. people with a sport-related occupation in the sport sector (ISCO 342*NACE 93.1), e.g. professional athletes, professional coaches in fitness centres;
2. people with non-sport jobs in the sport sector (NACE 93.1), e.g. fitness centre receptionists;
3. people with a sport-related job (ISCO 342) outside the sport sector, e.g. school sport instructors.

According to EUROSTAT data[2] for 2018, 0.8% of all the people employed in EU member states worked in sport; most of them in Sweden (1.6%) and the fewest in Romania (0.2%). EUROSTAT data[3] further shows that this represents 931,500 men and 762,600 women, in total nearly 1.7 million people across the EU. Of these, 638,600 (approximately 37%) were between the ages of 15 and 29. A large proportion of people employed in sports was thus at a stage in life when most of their peers actively pursued education; the respondents included

[1] Sport Statistics, 2018, EUROSTAT, https://ec.europa.eu/eurostat/documents/4031688/8716412/KS-07-17-123-EN-N.pdf/908e0e7f-a416-48a9-8fb7-d874f4950f57

[2] https://ec.europa.eu/eurostat/statistics-explained/index.php/Employment_in_sport

[3] Sport Statistics, 2018, EUROSTAT, https://ec.europa.eu/eurostat/documents/4031688/8716412/KS-07-17-123-EN-N.pdf/908e0e7f-a416-48a9-8fb7-d874f4950f57

in the analysis were professional athletes. An athlete's career should be considered from two perspectives:

- from the perspective of the content of their work;
- from the perspective of their professional status.

When it comes to content, the profession of an athlete is unlike any other. Standard classification of occupations classifies it as an occupation with the designated label ISCO-083421. Athletes and sport players participate in competitive sporting events. They train and compete, either individually or as part of a team, in their chosen sport.

Their tasks include:

(a) participating in competitive sporting events;
(b) participating in regular practice and training sessions and undertaking private training to maintain the required standard of fitness and skill;
(c) undertaking sports promotional activities and media interviews;
(d) maintaining a high degree of expertise in a particular sport;
(e) deciding on strategies in consultation with coaches;
(f) assessing other competitors and conditions at venues;
(g) competing in sporting events;
(h) adhering to rules and regulations associated with a specific sport.

In contrast to most other professions, athletes cannot pursue their sports careers for the entirety of their professional lives. The capacity to take part in sport events and competitions depends on each individual's psycho-physical aptitude. Natural laws, such as biological ageing and potential medical issues and injuries, mean that an athlete will sooner or later no longer be able to pursue their career. Former athletes are generally no older than 35 years and often significantly younger, i.e. they are far from retirement age.

Apart from nature of work, there are other aspects specific to a career in sports, especially its social and economic features. Very few other professions (except, perhaps, notable political and religious functions) are performed in the eye of the public to such an extent as an athlete's career. According to EUROSTAT[4]:

- in 2015, 30% of citizens of the 28 EU countries between the ages 16 and 64 attended at least one live sports event as a spectator, with some notable differences between particular countries and age groups;
- the smallest percentage of people (less than 10% in the age group from 50 to 64 years) attended a live sports event in Romania;
- the largest percentage of people (more than 60% of population in the age group from 16 to 29 years) attended a live sports event in the Czech Republic;

[4] https://ec.europa.eu/eurostat/documents/4031688/8716412/KS-07-17-123-EN-N.pdf/908e0e7f-a416-48a9-8fb7-d874f4950f57

Football is generally considered to be the most watched sport in the world. According to UEFA[5], a total of 6,099,772 people attended matches of the 32 best teams in the 2018–2019 Championships League. An average of 86,178 spectators attended FC Barcelona matches at their home stadium; 73,708 spectators attended the home matches of FC Manchester United; and 69,536 spectators attended the home matches of FC Bayern. The number of football spectators is equalled in some winter sport competitions. Over the last ten years, the three Hahnenkamm Cup ski races in Kitzbühel were attended on average by 81,725 spectators, with the greatest number, 98,000 in all, attending in 2017.[6]

Scientific literature has provided us with numerous explanations of why sport elicits the interest of such a great number of people:

- Vilma Cingiene & Skaiste Laskiene (2004) describe how after the end of Soviet occupation in 1989 and the formation of an independent state basketball became a part of national identity in Lithuania.
- According to Quinn (2009), people may also be interested in sports because of rivalry. People have known rivalry throughout history. Sports can be an expression of rivalries between social classes (in Slovenian hockey, for example, between the working class Jesenice and the more urban Ljubljana), the geographical provenance of the sports clubs (e.g. the rivalry between Madrid and Barcelona), or of rivalries between countries (e.g. Serbia and Croatia), regions, and even town districts.
- According to Quinn (2009) interest in sport may additionally be motivated because of the identification of individual social classes with a particular sport.
- Historically speaking, sport was also an avenue for achieving the equality of sexes.

Quite early on, researchers (Adler & Adler, 1998) also recognised that an athlete's involvement in sport may furthermore lead to their increased social status.

Because of the widespread interest in sport, it exerts both direct and indirect economic effects. Allmers and Maennig (2009) found that by organising the FIFA World Cup, Germany recorded 700,000 additional overnight stays and US$900 million in net national tourism income. In case of the 2010 World Cup in South Africa, a developing nation with significant levels of poverty, such expectations are of special importance. The 2010 World Cup had an economic impact of R21.3 billion (US$2.5 billion), i.e. ''an equivalent of 159,000 annual jobs,'' and US$845.8 million in additional government taxes.

Sport also exerts other economic multiplier effects. In 2017, the 28 EU member states exported a total of 9.333 million EUR of sporting goods and imported the

[5] https://www.worldfootball.net/attendance/champions-league-2018-2019/1/
[6] https://hahnenkamm.com/en/things-to-know/hkr-spectators-statistics/

equivalent of 12.034 million EUR. Between 2007 and 2017, EU exports and imports in sporting goods increased by more than 50%. During the same period, the annual average growth rate of value of EU international trade in sporting goods (excluding intra-EU trade) was 4.4 % for exports and 4.8 % for imports.[7] The PwC estimates that the total value of the US sports market in 2020 amounts to 75.71 billion US dollars (Gough, 2019).

All of this may result in significant economic benefits for athletes, but not necessarily. The Global Sports Salaries Survey[8] (hereinafter GSSS) conducted in 2018 looked at 349 teams and 18 professional leagues from 13 countries and 8 different sport branches. The survey encompassed 10,089 athletes who jointly earned a total of 22.2 billion US dollars in the year 2018. The 18 leagues and 349 teams scrutinised in the main list include the "Big Four" of American sports, i.e. NFL (gridiron, American football), NBA (basketball), MLB (baseball) and NHL (ice hockey); the "Big Five" football leagues of Europe, i.e. the English *Premier League* (EPL), the German *Bundesliga*, the Spanish *La Liga*, the Italian *Serie A* and the French *Ligue 1*; they further include the Australian AFL (Aussie Rules), the Canadian CFL (football, gridiron), the Japanese baseball NPB and IPL (cricket) from India.

According to GSSS, NBA players were the best paid athletes in 2018. Their average yearly salary amounted to 7.77 million US dollars. Of course, this is just an average: individual salaries vary. Differences exist between teams as well as among players within the same team. This is true for both basketball and football. Within the same sport there is significant variance both between teams and between different countries. The average basic pay in the *Premier League* is 36% higher than in the next best, *La Liga*, and as much as double the pay in Italian and German top divisions. The average salary in *La Liga* in 2018 was 2.9 million US dollars and 1.84 million US dollars in the *Bundesliga*.

2018 was the year of the World Cup, which is why the GSSS also analysed the salaries in football leagues from 68 different countries. *La Liga* giant, Barcelona, which is home to Lionel Messi, is the best paid team in global sport and the first sports team in history to have average basic annual pay of more than £10m, according to Sporting Intelligence's Global Sports Salaries Survey. Most athletes' salaries, however, are far from this average. Thousands of athletes are active in sport branches and leagues which have never been encompassed by a GSSS survey. During their time in sports some of them will earn enough to provide them with social security for the rest of their lives, but most of them will not.

An average salary of a football player playing in the national first football league amounts to 100,000 US dollars or more in only 30 countries. If one of the best

[7] https://ec.europa.eu/eurostat/statistics-explained/index.php/International_trade_in_sporting_goods

[8] https://globalsportssalaries.com/GSSS%202018.pdf

paid athletes in the world, Lionel Messi, played for his native Argentina (which won the world cup several times), his yearly average salary would be a solid 379,054 US dollars. In Switzerland, the average yearly salary of a first league player is 324,020 US dollars; in Slovenia, it is 33,519 US dollars. In 23 of all the countries included in the GSSS survey (among them also some EU members), the average yearly salary of a player in a national first league is less than 30,000 US dollars. We should keep in mind these are averages. As already mentioned above, there are significant differences between individual clubs and players. In the English Premier Football League, for instance, the ratio between highest and lowest paid clubs is 6.82 to 1.

In individual sports, the best paid athletes are tennis players. STATISTA[9] reports that in the 2018–19 season Roger Federer earned 7.4 million US $ in prize money alone. Golf players are also relatively well paid. In the *European Tour* full status is only granted to tournament winners and top 110 players on the previous season's rankings. Players in this tier of status have averaged an earning potential of 13.4 million US dollars in the last two seasons—taking home just under $700,000 of that on average (or five per cent of the potential).[10]

Despite a number of ski races attracting the same number of spectators as football, the salaries of skiers remain significantly lower. In 2019 the prize fund for the three most prestigious races in Kitzbühel totalled 550,000 EUR. The winner in downhill, generally considered one of the most prestigious races of the season, won 74,000 EUR. In the 2018–19 Alpine skiing season, there was a total of 35 women's and 38 men's races. In all, 138 women and 160 men received prize money. Prize awards exceeding 30,000 Swiss francs (CHF) were won by 31 women and 42 men, with Mikaela Shiffrin topping the list by winning a total of 886,386 Swiss francs. Only 9 women and 14 men earned more than 100,000 CHF in prize money.[11] Earnings in other skiing disciplines are significantly lower. In ski jumping, the top earner of the 2018–19 season was Stefan Kraft, with a total of 135,300 CHF. During the season only four ski jumpers earned more than 100,000 CHF; only 19 ski jumpers won more than 30,000 CHF of prize money.[12] In view of the fact that 50 competitors qualify for each competition, with even more competing in the qualifications, this is a very small number of athletes.

It is therefore true that some athletes earn millions of Euros, dollars, or pounds during their sports careers. However, this is only a small proportion of athletes pursuing careers in high-level sport. In some of the most popular sport disciplines a good half of elite athletes competing in top sporting events cannot make a living from prize money alone.

[9] https://www.statista.com/statistics/201486/wages-of-the-worlds-highest-paid-tennis-players/
[10] https://globalsportssalaries.com/GSSS%202018.pdf
[11] https://www.fis-ski.com/DB/alpine-skiing/prize-money-ranking.html
[12] https://www.fis-ski.com/DB/ski-jumping/cup-standings.html?sectorcode=JP&cupcode=WCPR&disciplinecode=ALL&gendercode=M

At a certain point an athlete's career comes to a close. This opens up new professional vistas. The rhythm and routines of everyday life alter significantly. Former streams of income are no longer available, so the athlete is forced to look for new opportunities. New faces dominate the field of sports. The public gradually forgets the old heroes and the perception of the (now former) athlete changes. Leaving sports often also entails a change in the athlete's social environment. The former athlete is thus faced with multiple transformations:

- the athlete leaves their profession and is forced to look for a new one;
- this results in altered streams of income;
- all of the above leads to a changed perception of the athlete's social status.

Ending a career in sports necessitates a shift to a new profession.

This transition is often problematic, both for athletes who earned significant amounts of money and for those who did not. High earnings during athletic career do not necessarily guarantee permanent social security. Anecdotal evidence and research both show that shortly after ending their career in sports, a significant number of athletes is faced with financial problems or even bankruptcy, despite having earned millions in income (Urek, 2016). Carlson et al. (2015) compiled data on 2,016 NFL players drafted between the years 1996 and 2003. Their average yearly salary in the year 2000 totalled 3.2 million US dollars. By the end of the study in 2015, one in six players from the sample went bankrupt (nearly 16% of all the study participants). The prospect of bankruptcy is especially high in cases where athletes lack financial literacy (Lusardi, 2015).

On the other hand, transitioning into a new career is also difficult for athletes without spectacular earnings. Like big earners, these athletes pursued sports professionally, but still made barely enough to make ends meet.

After ending their career, many athletes are unable to gain employment that would allow them to fully integrate into their environment and may thus even become a social problem. This may be attributed to the following reasons:

- while active in sports elite, athletes failed to earn enough income to tide them over during their period of transition;
- they failed to obtain the education necessary for entering the job market after the end of their athletic career;
- the changed perception of their social status and identity after the end of their career leads former athletes to experience feelings of disappointment and bitterness;
- their work involved living in a specific social environment (often limited to the field of sport, athletes, coaches, fans, sport officials and journalists), which the athletes leave or are excluded from once their careers are over—at the same time many find it difficult to quickly integrate into completely new environments.

The field of dual career of athletes focuses on all of the above issues.

Dual career of athletes

The idea of the dual career of athletes was first developed and its first model elaborated in 2003 and in 2004, respectively. Stambulova (2003) and Wylleman, Alfermann, & Lavallee (2004) designed models of athletic career transitions with realistic frameworks and perspectives. The models assumed that academic or professional development presents an important foundation for athletes' overall development, i.e. their athletic progress as well as their psychological and psychosocial development. These assumptions were grounded in psychological theories. Despite the initial interest in sociological aspects of the dual career of athletes, the main focus of study considered the athlete as an individual. Côté (1999), for instance, looked at the influence of coaches, peers, and parents on the career transition of athletes. Somewhat later, research turned to the analysis of athletes' environments. Numerous recent studies have analysed the role of environment in talent development (e.g. Henriksen, Stambulova, & Roessler, 2010) and the influence of macro-context (national/cultural context in relation to sports) as factors influencing career transitions of athletes and athletic retirement.

Recent studies (Stambulova, Wylleman, 2015) focus on following research areas:

- analyses of career development that look at decisions and factors affecting the dual career of athletes;
- studies of career transitions (athletes' transitioning into elite sports schools or universities);
- career assistance, which includes various types of support for dual careers.

All of the above aspects were integrated into a model (Wylleman, Reints & De Knop, 2013) with a multidimensional framework for the career development of athletes. This quickly became the primary model for the study of dual career of athletes, especially in Europe (Stambulova, Wylleman, 2018).

Apart from the holistic model, an ecological perspective is an additional and important aspect in the study of the dual career of athletes. Henriksen and Stambulova (2017) encompass the full spectrum of athletes' experience both inside and outside sport, including the influence of social environment, micro-levels (individual) as well as macro-levels (social, organisational), and athletic and non-athletic influences. Based on the above propositions and other significant findings, Küttel's (2017) doctoral thesis developed a brand new theoretical model that brings together various theoretical foundations and scientific disciplines. Küttel's work focuses primarily on dual career and athletic retirement, with the so-called *Working Model of Factors Contributing to the Quality of the Transition*. The model includes various factors (resources and obstacles in transitioning from a career in sports):

- **individual characteristics**: gender, age, education, sports achievements, total income, income generated by sports, work experience, confidence in one's skills, the athlete's identity, their popularity, investments and benefits;
- **characteristics of the athletic career end**: personal/motivational reasons, reasons connected to sport results or sports environment, reasons related to employment/education, financial reasons, family reasons, health reasons, voluntary athletic retirement, plans for the future, timing, end of career in sports as loss or relief;
- **environmental characteristics:** supportive personal environment, supportive sports environment, supportive sports branch environment, popularity of individual sport disciplines.

All the above factors influence the quality of an athlete's transition into a professional career. Transitioning from an athletic career is often accompanied by: emotional problems, problems with one's social environment, health issues, financial problems, lack of adequate professional skills, overly rapid transition into a new career, or contentment with career transition.

Wylleman, De Brandt & Defruyt (2017) researched the competencies of key stakeholders providing supportive environment for the dual career of athletes on various levels. Their study found that a relevant conceptual framework should include the following segments of competencies:

- advocacy;
- co-operation;
- reflection and self-regulation;
- organisational awareness of the dual career of athletes;
- empowerment;
- defined responsibilities.

Hakkers (2019) proposed a four-pillar approach of providing support to elite athletes and their dual careers, which is based in the support of the athlete's primary sports environment, i.e. sport clubs and associations. The four pillars of the primary sports environment are:

(1) **creating optimal conditions for dual career of athletes**, which entails
   - a strong vision of dual career of athletes,
   - establishing a network of partner organisations and mutual formal agreements,
   - providing optimal conditions by guaranteeing facilities supporting dual career,
   - building awareness of the importance of dual career of athletes;

(2) **co-ordinating elite sport with education**: accreditation; efficient co-ordination; flexibility of educational process; co-ordination of specific content; individual approach towards planning a dual career; development of further education;

(3) **specialist teams in the field of dual career of athletes**: working with the joint dual career team ; inviting experts in the field of dual career; staff training;
(4) **advisory role of support in dual career**: development of life skills; psychological support; educational support; individual identification; developing skills in dual career of athletes.

A review article by Stambulova and Wylleman (2018) critically appraises the latest European dual career research, in particular the psychology of dual career of athletes, and categorises the scientific contribution of specific studies according to:

(a) conceptual and theoretical contribution;
(b) methodology used;
(c) empirical characteristics (of major fields of research);
(d) applicative features of support in dual career of athletes.

The assessment included 42 research articles published in the period 2015–2018. The review highlights the progress made and some gaps in existing research into dual career of athletes. It also finds that the term “dual career of athletes” became established in the above mentioned period and ascertains that the majority of reviewed studies uses a holistic model of a career in sports. The main research areas are categorised into two fields:

1. sport and education;
2. sport and professional life.

(a) Dual career in sport and education

Research focusing on sport and education includes the following thematic segments:

- career paths in dual career of athletes (e.g. Tekavc et al., 2015; Torregrosa et al., 2015; Fuchs et al., 2016; Knight et al., 2018);
- transitions in dual career of athletes (e.g. Stambulova et al., 2015; Tekavc et al., 2015);
- demands of dual career of athletes (e.g. Stambulova et al., 2015; Tekavc et al., 2015);
- competencies and personal resources in dual career of athletes (e.g. Stambulova et al., 2015; De Brandt et al., 2018);
- motivation and identity in dual career of athletes (e.g. Lupo et al., 2015; Stambulova et al., 2015; Fuchs et al., 2016; Kerštajn & Topič, 2017);
- stakeholder support network in dual career of athletes (e.g. Brown et al., 2015; Stambulova et al., 2015; Fuchs et al., 2016; Kerštajn & Topič, 2017);
- environment in dual career of athletes (e.g. Brown et al., 2015; De Bosscher et al., 2016; Fuchs et al., 2016);
- obstacles in dual career of athletes (e.g. Brown et al., 2015; Stambulova et al., 2015; Fuchs et al., 2016);

- strategies for successful dual career of athletes (e.g. Brown et al., 2015; Stambulova et al., 2015);
- health, lifestyle and athlete well-being as part of dual career (e.g. Sallen et al., 2018);
- unsuccessful dual career of athletes (e.g. Gledhill, Harwood, 2015);
- benefits and costs of dual career of athletes (e.g. Debois et al., 2015);
- athletic retirement and transition into new careers (e.g. Debois et al., 2015; Torregrosa et al., 2015; Küettel et al., 2017).

(b) Dual career in sport and work
Research focusing on sport and employment after athletic retirement mainly examines the employability of former athletes (e.g. Debois et al., 2015).

Regulatory framework for dual career in the EU

Lately, the significance of dual career of (elite) athletes has been recognised and supported by the EU and its member states as well as sport associations and management structures in individual sport disciplines. The dual career of athletes is regulated by guidelines on a European level and by various national legislative frameworks.

The following strategic documents regulate European policy on sport and directly affect the dual career of athletes:

a) EU guidelines on dual careers of athletes (2012);
b) Study on minimum quality requirements for dual career services (2016);
c) Olympic agenda 2020.

a) EU guidelines on dual careers of athletes[13]
The *EU guidelines on dual careers of athletes* were approved by the EU expert group "Education & Training in Sport" at its meeting in Poznań on 28 September 2012. The guidelines define policy areas and actions supporting the dual career of elite athletes.

They main challenges specified by the guidelines are quoted in full below:

- safeguarding of the development of young athletes, especially of children in early specialisation sports, young people in vocational education and training, and disabled athletes;
- balance between sports training and education and, at a later stage of life, balance between sports training and employment;
- end-of-sporting-career phase of athletes, including those who leave the system earlier than planned.

The document further defines the following policy areas:

[13] https://ec.europa.eu/assets/eac/sport/library/documents/dual-career-guidelines-final_en.pdf

Sport
- sport organisations
- sport academies and high performance training centres
- coaches and other members of performance teams
- supporting services

Education
- school education
- vocational education
- higher Education
- distance Learning

Employment
- combination of work and sport
- transition to a post-sport career
- social dialogue

Health
- psychological assistance
- medical support
- prevention programmes

Financial incentives for athletes
- scholarships
- other financial support
- quality framework

The guidelines specify relevant actions and task holders for each policy area.

According to *EU guidelines on dual careers of athletes*, one of the priority tasks of sport organisations is the promotion of dual careers. Sport organisations (confederations, federations, associations, clubs), which still have the tendency to focus primarily on the organisation of competitions, should define or review their policies and demand the development of dual career programmes. National sport bodies should promote and support the inclusion of the concept of dual careers in the various activities of their member sport organisations.

In terms of education, the EU guidelines propose the establishment of sport academies and high-performance training centres (HPTC). Sport academies exist in many modalities in EU member states. Alongside schools, local multi-sport academies without boarding facilities deliver extra sport activities for talented athletes and talent identification in certain sports. Municipalities, schools, and sport clubs are involved in these academies and local arrangements with all stakeholders involved are a key for their success. Clear objectives, definition of target groups and a link to regional and national talent programmes are recommended. Local and regional sport academies set up by (professional) clubs and federations for selected talented athletes are common in the majority of member states. In many member states, national Olympic committees or sport federations run (inter-) national high-performance training

centres hosting different sports. The existence of such national training centres, where elite athletes train all year long, is essential in the organisation of the training of elite athletes. In general, critical mass of talented athletes of a country (starting from the age of 12) is gathered in one place or in a few places on a full time or part-time basis.

Similarly, the guidelines also address the areas of employment, health, finance, and incentives for athletes.

b) Study on the minimum quality requirements for dual career services[14]
The *Study on the minimum quality requirements for dual career services* was published in 2016. It is the result of collaboration between Amsterdam University of Applied Sciences, Birch Consultants, Directorate-General for Education, Youth, Sport and Culture (European Commission), Talented Athlete Scholarship Scheme and Vrije Universiteit Brussel.

The document is based on the conviction that elite athletes should be enabled to combine training with a career in sport. Similarly to EU Guidelines on Dual Careers of Athletes, the Study proposes the establishment of High Performance Training Centres (HPTC). These would provide athletes with optimal conditions to simultaneously pursue sports and engage in high performance sports. The Study on the Minimum Quality Requirements for Dual Career Services sets out minimum requirements for the establishment of HPTCs. These are founded on 5 pillars, which are quoted in full below:

Accommodation
- sleeping facilities, suitable for athletes' dimensions and size
- restaurant, serving healthy, fresh and well-prepared food
- sport facilities of the highest international training level
- rooms to study —ICT and Internet equipped—and to relax

Educational facilities
- relevant (for the individual), concerning the desired learning career
- encourage employability (of the individual), are linked to industry-recognized providers
- encourage commitment (of the individual), minimum amount of learning hours
- accredited, by national education standards and Ministry

Staff
- physiotherapy
- coach
- sport psychologist
- medical support

[14] https://op.europa.eu/en/publication-detail/-/publication/c9eddc9d-c3f9-11e5-8d08-01aa75ed71a1/language-en/format-PDF/source-search

Facilities
All facilities related to accommodation and education should be located close to each other, which enables athletes to simultaneously pursue training and education.
Services

- lifestyle support
- career support
- medical support

c) Olympic agenda 2020[15]
Olympic agenda 2020 is described as "the strategic roadmap for the future of the Olympic Movement. The 40 recommendations are like pieces of a jigsaw puzzle that, when put together, form a picture that shows the IOC safeguarding the uniqueness of the Olympic Games and strengthening sport in society." The Olympic Agenda 2020 was unanimously agreed at the 127th IOC Session in Monaco on the 8 and 9 December 2014. It includes 20+20 recommendations for the Olympic movement for the period 2014–2020.

The 40 recommendations included in the Agenda 2020 do not explicitly address the dual career of athletes. However, recommendation 18 is pertinent in this context (Strengthen support to athletes). Furthermore, a number of other recommendations directly or indirectly refer to the new values embraced by the Slovenian Olympic Committee and to working with young athletes.

Method

We approached our first research question by analysing legislation and acts issued by the Ministry of Sport and the Slovenian Olympic Committee.

The answers to our second question were collected through an anonymous online questionnaire, created in the open-code online survey application 1KA (available at: www.1ka.si) and by sending the link to the anonymous questionnaire to a selected e-mail list of elite athletes. The online questionnaire was available from 23 May 2018 to 22 June 2018. The results were exported from 1KA and entered into a programme for statistical data analysis, IBM SPSS, where they were statistically processed.

Instrument
The online questionnaire inquired about nine segments: (i) demographic data, (ii) information on athletes' social class, (iii) information on athletes' social environment, (iv) information on athletes' sports branch, (v) information on programmes for dual career of athletes, (vi) information on support provided by educational institutions, (vii) information on systemic, state-level support, (viii)

[15] https://stillmed.olympic.org/Documents/Olympic_Agenda_2020/Olympic_Agenda_2020-20-20_Recommendations-ENG.pdf

information on support from human resources management, (ix) information on athletes' commitment. The questionnaire was a part of a wider study on the dual career of athletes. The results which concern the present chapter are presented below (in percentages only).

Sample

The *Sports act*[16] defines an athlete as a natural person registered with a national branch association and competing in official competition systems of national branch associations. On the initial day of the survey, the official record of registered athletes in the Republic of Slovenia numbered 44,146 athletes. There was a total of 6,685 categorised athletes competing in the official competition systems of national branch associations, among them:

- national class athletes: 2,240
- youth class athletes: 3,249
- elite athletes: 1,196

The questionnaire was only sent to categorised elite athletes.

In keeping with the *Sports act*, the status of an elite athlete may be granted to any citizen of the Republic of Slovenia with internationally recognised elite sport achievements. The criteria for elite sport achievement stipulated in section one and the duration of the status are determined by a council of experts on the recommendation of the Slovenian Olympic Committee or the competent national branch association. The status is granted by the Slovenian Olympic Committee–Association of Sports Federations. Elite athletes are entitled to the following rights:

- health insurance;
- accident insurance;
- parental protection;
- pension and disability insurance;
- adaptations to curriculum requirements.

The process of obtaining the above rights and their duration are prescribed by the Minister. Upon their request, an elite athlete may be granted full coverage of compulsory health insurance, accident insurance, parental protection contributions and compulsory pension and disability insurance, which are covered by the state budget; only athletes with the status of a world-class elite athlete may apply, provided their income does not exceed three average Slovene salaries.

On the initial day of the survey, elite athletes held the following types of status:

- Olympic-class athlete: 27;
- world-class athlete: 158;

[16] Zakon o športu, Uradni list Republike Slovenije Uradni list, 29/2017 in 21/2018// *Sports act*, Official Gazette of the Republic of Slovenia, 29/2017 and 21/2018

- international-class athlete: 369;
- perspective-class athlete (promising athlete): 642.

An invitation to take part in an online survey was sent to the email addresses of all the registered elite athletes (1,196 people). 244 athletes responded. A number of questionnaires was not fully completed. Our analysis of results is based only on fully completed questionnaires, i.e. a total of 96 questionnaires. The sample included 55 men (57.3%) and 41 women (42.7%). The youngest respondent was 16 years old and the oldest 55 years old; the mean age of respondents was 26, with the standard deviation 7.392. The respondents are active in 21 different sport branches. The average duration of their athletic careers is 9 years and 5 months, with the standard deviation 6.273. The respondents' highest education level achieved is presented in Table 1.

Table 1: Current education level

Level of education	**Number**	**Percentage**
Primary school	12	12.5
Vocational school (2- or 3-year)	5	5.2
4-year secondary school, grammar school	58	60.4
College	3	3.1
Higher vocational school, first Bologna cycle	9	9.4
University education or second Bologna cycle (Bologna Master)	8	8.3
Doctorate of science	1	1.0
Total	**96**	**100.0**

35 (36.5%) respondents are still pursuing formal education; other respondents already completed or discontinued their education. 52 (54.2%) respondents have an individual sponsor; the others do not.

Results

We will begin by presenting the results of the first part of our study, i.e. the implementation of strategic documents and policies regulating the dual career of athletes in Slovenia.

The regulatory framework for the dual career of athletes in Slovenia consists of:

- Sports act;[17]
- Resolution on the national programme of sport in the Republic of Slovenia 2014–2023;[18]

[17] Zakon o športu (Uradni list RS, št. 29/17 in 21/18)

[18] Resolucija o Nacionalnem programu športa v Republiki Sloveniji za obdobje 2014–2023, (Uradni list RS, št. 26/14)/*Resolution on the national programme of sport of the Republic of Slovenia 2014-2023* (Official Gazette of the Republic of Slovenia 26/14).

- Implementation plan for the national programme of sport 2014– 2023;[19]
- Olympic agenda 2020 and Slovenian sport (2015).[20]

Sports act

The *Sports act* was adopted by the National Assembly of the Republic of Slovenia at its session on 30 May 2017. The Act defines public interest in sports, mechanisms of its implementation, competent bodies, conditions for expert work in sport, and the rights of athletes. Sustainable development is one of the key principles upheld by the act. Public interest in sports also includes social responsibility and associated tasks. The implementation of public interest is funded by the state budget, the local community budgets, the Foundation for Sport, donations, sponsorship funds and other sources. The law stipulates the creation of a national programme of sport, which should also include sports policies promoting social responsibility in sports.

With regard to the dual career of athletes, one of the most important articles of the programme is article 35, which defines the rights of athletes. These also pertain to education, so that athletes have the right to:

- study and curriculum adaptations, in the scope and manner prescribed by the regulation in the field of education, specifically in the field of tertiary education;
- adaptations to *matura* (secondary school exit exam).

Elite athletes who are winners of Olympic medals, Paralympic medals, Deaflympics medals, chess Olympiad medals, world championships in Olympic team sports, or Olympic sport disciplines in individual sport branches furthermore have the right to reimbursement of costs of education pursued within the framework of educational programmes accredited in the Republic of Slovenia.

Resolution on the national programme of sport of the Republic of Slovenia 2014–2023

The *Resolution on the national programme of sport of the Republic of Slovenia 2014-2023* was adopted by the National Assembly of the Republic of Slovenia at its 23rd session on 2 April 2014. The resolution addresses the dual career of athletes in section 6.3.2 *The status and rights of athletes*, coaches and professional programme support and in subsection 6.3.2.1 *Education of talented and elite athletes.*

[19] Izvedbeni načrt za Nacionalni program športa v Republiki Sloveniji 2014-2023, Ministrstvo za izobraževanje znanost in šport ter Zavod za šport RS Planica, Ljubljana, 2014./ *Implementation plan for the national programme of sport in the Republic of Slovenia 2014–2023*, Sport Directorate of the Ministry for Education, Science and Sport and Planica Sport Association, Ljubljana, 2014.

[20] Kolar, E (ed.). Pavletič Samardžija P. (ed.) (2015): Olimpijska agenda 2020 in slovenski šport (2015) / Olympic agenda 2020 and Slovenian sport. Slovenian Olympic Committee – Association of Sports Federations

The resolution is based on the idea that a humanist approach in sport should also include the care for athletes' education. The state has an important duty in providing equal access to education for talented[7] and elite athletes. Most of Slovene sport is not attractive from the perspective of sponsorship; on the other hand, level of education is closely tied to social status after the end of a career in sports. This is why study and curriculum adaptations provide talented and elite athletes with the opportunity to secure a professional existence after the end of their sports career and thus prevent one of the possible pitfalls of elite sport.

Implementation plan for the national programme of sport in the Republic of Slovenia 2014–2023

Based on the *Resolution on the national programme of sport of the Republic of Slovenia 2014-2023*, the Sport Directorate of the Ministry for Education, Science and Sport developed an *Implementation plan for the national programme of sport in the Republic of Slovenia 2014–2023*. The content of the implementation plan mirrors the articles contained in the resolution. Section 6.3 *Sport development* and subsection 6.3.2.1 *Education of talented and elite athletes* follow the EU guidelines on the dual career of athletes, especially those pertaining to possibility of gaining education.

The various models of co-ordinating study and sports activities provide young athletes with more equal opportunities in primary and secondary education; in the past, there was no adequate provision made for this on the level of tertiary education. The national programme for sport thus introduces the following measures:

- improving the quality of incentives for talented student athletes (support in curriculum/study adaptations, scholarship funding);
- increasing the number of sport departments (student classes) in non-grammar secondary school programmes;
- improving the quality of sport student classes in secondary schools.

On the level of primary school, the status of a student athlete is the primary incentive for talented student athletes; on the secondary level, it is the status of promising or elite athlete, which includes the following rights:

- individual study adaptations;
- sport departments (classes) in secondary school (with fewer numbers of students per class);
- assistance in co-ordinating study and sport responsibilities, with the assistance of a pedagogical and sports coordinator;
- extra classes – individual assistance;
- adapted study methods and forms;
- announced examination;
- schedule adaptations;
- content adaptation tailored to training needs – sport training partially provided at school;

- allowed school absences;
- provisional pass;
- the right to sit exams until the end of academic year;
- a 2-year extension to status of high-school student;
- possibility of repeat enrolment in the same year;
- possibility of enrolling into a *matura* course;
- possibility of living in halls of residence;
- free-time individual study assistance for residential student classes.

Apart from all of the above, the implementation plan for the period 2014–2023 also foresees the following measures:

- improvement of assistance in co-ordinating study and sport responsibilities for student athletes in regular secondary schools and in secondary schools with specialised sport departments;
- scholarships offered by Slovenian universities to elite athletes at the end of career in sports;
- development of a tutorship system for elite athletes studying at universities;
- development of study assistance–individualising the study of elite athletes (e.g. e-learning), etc.

The Olympic agenda 2020 and Slovenian sport (2015)

The *Olympic agenda 2020 and Slovenian sport* is the strategic implementation plan for the Olympic agenda 2020; it was developed by the Slovenian Olympic Committee. The objectives and measures related to the dual career of athletes are mentioned in Recommendation 18 (Strengthen support to athletes). One of the objectives stipulated in the recommendation by the Slovenian Olympic Committee is improving conditions for the comprehensive development of athletes (Objective 3).

The projects proposed by the Slovenian Olympic Committee in order to achieve this include:

- scholarships for athletes;
- a social fund for athletes (foundation for supporting athletes from socially-disadvantaged backgrounds);
- a fund for elite athletes;
- distance learning and the development of the "dual career" model;
- tutoring for athletes in educational systems;
- rewards for sporting achievements;
- a national programme for measurements and providing advice to athletes;
- athlete health insurance;
- recruitment of top coaches and athletes in the process of developing a second career and young researchers in the field of sport in the framework of the "Development of Human Resources in Sport";
- dissemination of Olympic values-based education.

The following section provides an overview of the answers to our second research question, i.e. the practical effects of all of the above measures on the lives of elite athletes and the direct influence of EU guidelines on elite athletes in Slovenia. The findings are summarised in the results below:

- Nine (9) respondents (9.4%) were awarded a scholarship (general scholarship).
- Thirty-one (31) respondents (34.4%) were part of the sport scholarship programme developed by the Olympic Committee.
- Three (3) respondents (3.1%) were part of the athlete tutorship programme developed by the Olympic Committee.
- Three (3) respondents (3.1%) were beneficiaries of the paid tuition programme developed by the Olympic Committee.
- Five (5) respondents (5.2%) were included in the distance learning project.
- Fifteen (15) respondents (15.6%) were taking part in programmes of individual counselling for co-ordinating education and a career in sports.
- Twenty-eight (28) respondents (29.2%) were using their right to schedule adaptations at their schools.
- Twenty (20) respondents (20.8%) were using their right to reduced compulsory attendance at their schools.
- Twenty-six (26) respondents (27.1%) were using their right to exam schedule adaptations at their schools.
- Eleven (11) respondents (11.5%) were part of distance education programmes at their schools.
- Thirty-five (35) respondents (36.5%) used their student athlete status at their schools.
- Twenty-four (24) respondents (25.0%) attended sport departments (student classes) at their schools.

Conclusion

Apart from elite sport, sport may encompass various activities: sports activities for children and youth, recreation of citizens contributing to health and well-being, collective sports or recreational events, etc. Elite sport differs from other forms of sport, because the state recognises it as a service. Being an elite athlete is thus a profession with specific attributes and work characteristics (e.g. competing, taking part in sport events, etc.). It differs from others jobs by not being subject to various rules which apply elsewhere: specified working hours, attendance lists, free choice of vacation time, and so on. When we first drafted our study, we were thus struck by the fact that—given the specifics of their work—most elite athletes are poorly remunerated for their effort. Whereas it is true that earnings in some sport branches reach millions, in general athletes earn far less. Most elite athletes with average results thus do not have the opportunity to earn enough during their career in sports to support themselves

once their career ends. This is why we strongly believe in the necessity of implementing the idea of the dual career of athletes.

Our research analysed the case of Slovenia. It has shown that the field of dual career in Slovenia is well developed. The EU guidelines on dual career were implemented in the *Resolution on the national programme of sport* and its *Implementation plan*. Furthermore, *Olympic agenda 2020* was implemented in various programmes realised by the Slovenian Olympic Committee. We can therefore conclude that, at least on the macro level, the issue was embraced by the profession and policy makers alike and that the response of the Slovenian Olympic Committee has been adequate. Unfortunately, the situation is different on the micro level. We have seen that a relatively large proportion of athletes uses the rights afforded to them by the legislation, e.g. the athlete status, adjusted exam schedule, or the right to complete *matura* in two parts. However, there is far more work to be done in the field of elite athlete support and adaptations in areas which are not covered by the legislation but are of vital significance to athletes themselves.

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The effect of adaptations on the academic success of athletes

Our analysis is placed within the wider context of the issue of dual career of athletes; it focuses on the education of high-school and university students who are categorised athletes. We are interested in specific subject adaptations, both on the level of curriculum and school. The aim of our research is to determine whether adaptations affect overall academic success of the student athletes in question. In terms of specific subjects, our point of departure was the idea of *curriculum*. In studying the school as a whole, we turned to the notion of a *learning organisation*. Our benchmark for measuring academic success was the grade achieved by athletes during their last assessment. The result analysis of the adaptations made to specific curriculum elements demonstrates discrepancies between elements and their corresponding measures included in the *Implementation plan for the national programme of sport 2014–2023* and those elements not mentioned by the plan. The most significant attributes of a learning organisation found to affect the academic success of student athletes include the prior experience of school in working with athletes and a shared awareness of a common goal among all the employees of the school. We have not found statistically characteristic linear correlations between academic success and curriculum adaptations. In contrast, there was a statistically significant difference between grades achieved by students who used some of the adaptations *every day* and those who *never* employed them. On a more general level, our research has demonstrated that curriculum adaptations were not realised to the extent necessary.

Introduction

In 2018, 638,600 people aged between 15 and 29 worked in the field of sport across the EU. These people are at a life stage during which a significant number of their peers is still pursuing education. Even though the number above does not only include professional athletes, but also entails professional coaches, sports centres employees and PE teachers, the majority are still athletes.

Let us look at the example of Slovenia. In 2018, the average number of people in employment in Slovenia was 772,287;[21] following EUROSTAT data, which places the percentage of people employed in sports at 0.6%, this means that a little over 4,600 people worked in sport. In the same year, the Slovenian Olympic Committee register listed 6,059 categorised athletes.[22] Many athletes thus also pursue sports as amateurs—this means that apart from having to train to the extent that qualifies them for the status of categorised athletes, these individuals thus also need to secure a living outside sport.

According to EUROSTAT,[23] in 2018 an average of 0.8% of all people in employment in the EU worked in sports (the majority in Sweden, with 1.3%, and the fewest in Romania, with 0.2%; in Slovenia, the percentage is 0.6%). This is a total of 931,500 men and 762,600 women, in all, almost 1.7 million people. As already mentioned above, approximately 37% (i.e. 638,600) of them are aged between 15 and 29 years.

Because of a widespread interest in sport, it is obvious that sport also exerts economic effects. As demonstrated by the above statistics, it also provides jobs to many athletes. The job of a professional athlete has all the attributes of a regular profession:

- typical work specific to athletes;
- skills and competencies specific to individual sport branches;
- and professional (and expert) associations of athletes.

However, it significantly differs from other professions in that that an athlete's career is temporary. This is primarily due to ageing which—even without injury—affects the individual's psycho-motor skills to such an extent that they are eventually unable to competitively perform as an athlete. At the end of their career in sports, athletes are thus faced with a challenge of having to find new sources of income in changed circumstances.

Of course, some athletes earn millions during the span of their careers—e.g. Roger Federer has so far earned 7.4 million US dollars in prize money alone—

[21] https://www.stat.si/StatWeb/News/Index/7404
[22] Data accessible at: https://www.olympic.si/sportniki/registracija-in-kategorizacija
[23] https://ec.europa.eu/eurostat/statistics-explained/index.php/Employment_in_sport

and are thus not faced with these problems. The Global Sports Salaries Survey[24] (hereinafter GSSS), which was conducted in 2018 on a sample of 10,089 athletes, showed that they earned a joint total of 22.2 billion US dollar in that year alone. On average, the best paid athletes in 2018 were the NBA players. Their average yearly salary amounted to 7.77 million US dollars. Of course, this is just an average: salaries among individual players vary. Differences exist between teams, as well as among players within the same team. In terms of individual sports, tennis players are by far the best paid athletes.

In some sports, the situation is comparable to basketball. 2018 was the year of the World Cup, which is why the GSSS also analysed the salaries in football leagues from 68 different countries. The football club Barcelona is the first sports club to have ever achieved an average yearly salary of 10 million US dollars per player. Compared to football players, skiers come across as veritable paupers, with a “paltry” total of 886,386 CHF won by the top earner Mikaela Shiffrin in season 2018–19. In ski jumping, the top earner of the season 2018–19 was Stefan Kraft, with a total of 135,300 CHF.

As seen above, the EU has several hundred thousand categorised athletes. Most of them are relatively unknown to the public, since only a handful take part in the biggest sporting events—there were 11,238 contestants at the Olympic Games in Brasil and 2,952 contestants at the Winter Olympics in PyeongChang in South Korea in 2018.

However, even athletes commonly in the public eye, e.g. on TV, are generally not fortunate enough to secure a lifetime of financial security during their athletic careers. In some of the most popular sport branches (even in disciplines such as skiing or ski jumping) half or more athletes taking part in top competitions do not earn enough in prize money to make a living. In Alpine skiing (disciplines: downhill, slalom, super G and Alpine combined), prize awards exceeding 30,000 CHF were only won by 31 women and 42 men in the entire season 2018–2019. In the same season only four ski jumpers earned more than 100,000 CHF. In 23 of the countries included in the GSSS survey (among them also some EU members, including Slovenia), the average yearly salary of a football player in a national first league is less than 30,000 US dollars with, as noted above, significant differences between clubs and players.

The question of providing for athletes once they retire is, in fact, a long-standing issue which affects a great number of people. It is therefore surprising that it took so long for the profession and policy-makers to address this problem, since it is in effect a question of social responsibility. The idea of social responsibility is relatively old. It describes organisations voluntarily taking responsibility for various social, economic, ecological, and cultural issues. The idea that corporations should also tackle these issues originated in the 19th century. The

[24] https://globalsportssalaries.com/GSSS%202018.pdf

term “social responsibility” was first used in 1953 by Howard Bowen in his book *Social responsibilities of the businessman* (Demmerling, 2015).

Discussions of social responsibility often refer to “Caroll’s pyramid”. Caroll (1979) used it to describe the hierarchy of four responsibilities:

1. **Economic responsibility** is obligatory or required. It is the priority and responsibility of every organisation to achieve an adequate business outcome. Profitability or at least viability, i.e. keeping expenses lower than income, is the only way for a business to survive.
2. **Legal responsibility** is also required. A business is required to follow the regulations and abide by the law.
3. **Ethical responsibility** is voluntary. It includes the obligation and readiness of an organisation to act morally and ethically.
4. **Philanthropic responsibility** is voluntary. It refers to the obligation and readiness of an organisation to give back part of the profit to society. Even though philanthropic responsibility is discretionary, it is highly important.

Surprisingly, even though the idea of social responsibility is well established and has been widely accepted for decades, it was only applied to former athletes in the 21st century. Over the past two decades, member states of the EU gradually came to the realisation that athletes should be provided for after their athletic retirement. The idea of dual career of athletes came into being. Dual career concerns the possibility for talented, professional and elite athletes to build an educational or job path simultaneously with a sport career.

The concept was originally developed on an academic level in the years 2003 and 2004. Some of the first academic work on the subject was written by Stambulova (2003) and Wylleman, Alfermann, and Lavallee (2004). In 2004 authors from Loughborough University published the first study on the topic, i.e. *Study on education of young sportspersons*.

Spurred by academic research, in 2009 the European Commission included the dual career of athletes in its document *Work plan for sport 2011–2014*. Sports priorities now also encompassed social values in sport, especially the health, social integration, and education of athletes. The document also stipulated the creation of the *Guidelines on dual careers of athletes* as one of the founding EU documents on European policy in the field of sport and the dual career of athletes.

Guidelines on dual careers of athletes were created in 2012 on the basis of the *Work plan for sport 2011–2014*; they were adopted at the conference "Education & Training in Sport" in Poznań on 28 September 2012. The guidelines define the following policy areas:

- sport
- education
- employment

- health
- finance

They also specify relevant actions and task holders for each policy area. The field of education, which is the topic of our analysis, further includes the following areas:

- school education
- vocational education
- higher Education
- distance Learning

After the adoption of the *Guidelines on dual careers of athletes*, several countries elaborated their own guidelines. In Slovenia, the core document in the field is the *Sports act*. The act had already been in existence before and was amended in 2017. The legally guaranteed rights of athletes relevant to dual career of athletes include rights related to education:

- the right to study and curriculum adaptations, in the scope and manner prescribed by the regulation in the field of education, specifically in the field of tertiary education;
- the right to *matura* (secondary school exit exam) adaptations.

The field of sport in Slovenia is further regulated by another important document, the *Resolution on the national programme of sport in the Republic of Slovenia 2014–2023*. The resolution was adopted by the National Assembly of the Republic of Slovenia on 2 April 2014. It addresses the dual career of athletes in section 6.3.2 *The status and rights of athletes, coaches and professional programme support* and in subsection 6.3.2.1 *Education of talented and elite athletes*. It stipulates that talented and elite athletes are entitled to school or study adaptations.

Based on the *Resolution on national programme of sport*, the Sport Directorate of the Ministry for Education, Science and Sport developed an *Implementation plan for the national programme of sport in the Republic of Slovenia 2014– 2023*. The content of the implementation plan mirrors the articles contained in the resolution. Section 6.3 *Sport development* and subsection 6.3.2.1 *Education of talented and elite athletes* follow the EU guidelines on the dual career of athletes, especially those pertaining to possibility of gaining education.

The *Implementation plan for the national programme of sport in the Republic of Slovenia 2014–2023* contains various measures related to education of athletes, among others:

- scholarships;
- development of a tutorship system for university student athletes;
- development of study assistance individualising the study of elite athletes (e.g. e-learning);
- granting of special rights to athletes.

The implementation plan also grants special rights to athletically gifted primary and secondary pupils and university students. Among these rights, the following are related to curriculum:

- individual study adaptations;
- extra classes – individual assistance;
- adapted study methods and forms;
- announced examination;
- schedule adaptations;
- content adaptation tailored to training needs – sports training partially provided at school;
- free-time individual study assistance for residential student classes.

The present study is focused on adaptations for athletes who are participants of the educational process at various schools. Our aim is to determine whether adaptations affect overall academic success of the athletes in question.
Our research focuses on two questions:

- Do adaptations on the level of subject affect the academic success of athletes?
- Do adaptations on the level of the organisation of school as a whole affect the academic success of athletes?

The effectiveness of schools became the subject of contemporary research relatively late. The first modern analyses of the successfulness of schools only appeared in the 1970s, during the time of the oil crisis. Some of the most well-known work in the field was done by American researchers Klitgaard and Hall,[25] whose main criterion for the effectiveness of a school was the rate of student completion. Their primary standard of successfulness is still valid today. Beadley (1992) elaborated other, secondary markers of success, among them grades achieved during assessment. We adopted this benchmark as an adequate indicator of academic success.

The adaptations were analysed by looking at the lowest level, i.e. the level of individual subjects. In order to fully understand the adaptations, we needed to systematically structure the subject. To do so, we employed the theoretical framework of a *curriculum*, especially in view of the fact that subject curricula represent the basic elements of an educational system. This is also evident in the *Implementation plan for the national programme of sport in the Republic of Slovenia 2014–2023*, which is structured in the same manner.

However, the effect of study adaptations cannot be fully analysed by looking solely at the level of individual subjects. Especially when evaluating schools, we need to look at the school as whole and the mutual interaction of its specific elements, since every organisation is “a system of norms and relations”.

[25] After: Beadley, Caldwell, Millikan, 1992.

There are numerous organisational theories available for the analysis of various aspects of study adaptations. After careful consideration we decided to look at study adaptations for high-school and university student athletes through the lens of the idea of a *learning organisation*. We are under no illusion that our choice will be able to encompass all the dimensions of an organisation—there are simply too many, which is why every analysis has its limitations. However, we decided on the idea of a learning organisation for the following reasons:

- it is complex enough to paint an adequate "picture" of an organisation;
- it answers the question whether and to what extent an organisation is capable of meeting the expectations of its environment;
- over the past decades, the notion of a learning organisation has become firmly established as the predominant concept of organisations with best practical results;
- the characteristics of a learning organisation can be defined to a degree where they are measurable.

Theoretical background

Curriculum

The word *curriculum* has its origins in Latin; its original meaning was "running". Throughout history it was often used in relation to education, e.g. in the 16th and 17th centuries the word *curriculum* referred to the "sequence of learning through the years". It was first used in the English-speaking context (as far as we know) by John Dewey. In 1942 and 1949, respectively, Giles[26] and Tyler[27] used the term *curriculum* to denote a **process of teaching and learning**, while keeping a predominant focus on **learning content**.

Today, curriculum is still often treated as a mere selection of learning content, even though Ralph Tyler proposed a new model of curriculum already in 1949. While Tyler still understood curriculum in terms of (learning) content, he also believed that a curriculum should answer four basic questions:

- What is the goal of education?
- What kind of "educational experience" (qualification) do the learners obtain?
- How is this "learning experience" organised?
- How do you ascertain whether the educational goal was achieved?

In 1962, Taba[28] proposed a new, amended version of the notion of curriculum. Curriculum now entailed:

- statement of the objectives of education;

[26] For more see: Giles, McCutcheon, Zechriel, 1942.
[27] Title of the original: Tyler, R., W.: (1949): Basic principles of curriculum and instruction; Chicago, University of Chicago Press., after: Kelly, 1989.
[28] Title of the original: Taba, H. (1962): Curriculum development: theory and practice, Harcourt, New York. After: Jarvis, 2004 and Kelly, 1989.

- selection and organisation of content;
- methods and organisational forms of teaching/learning;
- evaluation.

Arieh Lewy saw curriculum as a process: [29]

- determining the objectives of education;
- selection of learning content;
- creating strategies (organisational forms and methods) of instruction;
- preparing instructional materials;
- recruiting teachers;
- evaluation of materials;
- implementation.

A more or less common understanding has thus evolved about the nature of curriculum elements and the fact that they refer to education. The study of theory and practice in education, however, shows that separate elements of the curriculum may be approached in numerous other ways.

Learning organisation

Unlike the idea of curriculum, the notion of a *learning organisation* did not originate in education. It developed in a completely different context, i.e. it originated in the sphere of business. A **learning organisation** is one of the basic paradigms of human resource management. The beginnings of the idea of learning organisations go back to the 1960s, when it started to emerge in the United States and Europe. Its creation was directly influenced by business marketing philosophy. The sale of each product or service has its own life cycle: introduction into the market, peak sales and their eventual decline. A drop in market sales occurs when the competition offers the same or similar product or with the introduction of new or improved products. The beginnings of the idea of learning organisation coincide with a period of introduction of high-quality products from Japan (Toyota, Sony, Panasonic) into American and European markets. These products were not only affordable and well-made, but they were also continually improved, i.e. the companies were capable of offering ever new and improved models of cars, for instance, or electronics. The development of the idea thus has an economic background, since it was driven by the desire of businesses to maintain or increase their market shares.

Peter Senge is widely believed to be originator of the idea of a learning organisation. Senge (1990) posits that progress is not driven by anonymous, imaginary forces, but rather by people who expand their capacities and creativity, develop new ideas and have the freedom to engage with like-minded people—in other words, by people continually learning how to learn with others. The main strength of a learning organisation thus lies in its ability to continuously improve processes and products. This idea is closely tied to a notion of meritocracy, i.e. a society in which individual progresses is based on displayed

[29] For more see: Lewy, 1977.

talent, positive attitude, effort and work results. On the other hand, a learning organisation cannot exist in environments with a high degree of conformity, where individuals struggle for privileges and where progress is based on clientelism rather than merit, e.g. in businesses which are led by union leaders rather than managers.

In recent decades, the idea of a learning organisation has led to some key discoveries in science and technology and to the development of some major global companies. It was thus the basis for the growth of business giants, such as Microsoft, Google, Apple, Samsung, HP and numerous other companies. To this day, the idea of building a learning organisation is still the ideal of managers world over. Hur Chul-boo (2010) thus gives the example of the Samsung CEO Lee Kun-hee who, when taking over the company, declared it to be a learning organisation. Of course, we are all familiar with Samsung's success in the field of electronics and telecommunications.

The philosophy and practice of a learning organisation was gradually applied to other environments, such as medicine, sports, and education, i.e. dynamic fields which need to respond to the expectations of their environments. It will no doubt continue to exert its influence in the future. In fact, Lu et al. (2011) claim that meeting traditional criteria for planning new products, such as functionality, quality, cost and timing will always remain relevant. It might also provide an answer to one of the key contemporary challenges, the issue of sustainable development, and the development of products with zero or negligible effect on the environment.

As already mentioned above, the term *learning organisation* was coined by Peter Senge (1990), who believed that progress is based on the interaction of creative, learning individuals. To reflect this, Senge (1990) claims that a learning organisation also possesses five key attributes:

- excellence and personal mastery of employees;
- mental models;
- shared vision;
- team learning;
- systems thinking and systematic problem solution.

The excellence of employees in a learning organisation is demonstrated primarily by the **personal mastery** of individuals and their self-control. Self-control entails the capacity of an individual to commit their work efforts to long-term goals and their ability to eventually achieve them. One of the key features of a learning organisation is the establishment of a relationship between the individual and the organisation and a connection between the individual's learning and the learning of the organisation.

In his work *The Fifth Discipline* (1990), Senge describes a further characteristic of a learning organisation, which is development of **mental models**. The term

mental model is believed to have originated with Craig. It denotes a sort of an internal symbol or representation of external reality. Individual **mental models** include stereotypes, generalisations, preconceived notions, pre-existing mental scripts about what or how something should happen, what or how someone should act, or even about what people should look like (Craig, 1943). Mental models are often the reason or trigger for certain types of action or inaction. When entering an organisation, individuals usually come with certain stereotypes or preconceived notions. Because a goal can be understood as a type of a mental model, it is important to have goals in a learning organisation.

Many people, including top managers have their **personal vision**; this, however, may never translate into a **shared vision** or a **common goal** of a given organisation. History has shown that there *are* individuals capable of transforming their personal visions into the goal of an organisation and succeed. Their success is due to the motivation of their employees, their capacity to learn and their desire to achieve the set goal. Often the shared vision is to succeed against a competitor (Wang and Ahmed, 2003).

Senge (1990) believes that a team is the core or basic unit of learning in an organisation. Teams are formed primarily to achieve synergy between individuals. **Team learning** is the process of working collectively to achieve a common objective in a group.

A **systemic approach** entails the breaking down of a whole into components. Components are usually less complex and therefore easier to understand. A systems approach means that the characteristics of components and the nature of the interaction between them are studied to understand their effect on the whole.

After 1990, several other models of a learning organisation have emerged; none of them, however, is “perfect”. A well-known model was proposed by Nonaka and Takeuchi; its main focus is the transfer of knowledge within an organisation. Nonaka and Takeuchi (1995) propose that creation of knowledge is the result of an interaction between implicit and explicit knowledge. This interaction takes place through the processes of socialisation, externalisation, combination, and internalisation. The *socialisation* of knowledge begins by building connections that enable and allow the members of an organisation to exchange experience and thus create implicit knowledge. *Externalisation* enables the members of a group to join the process of converting implicit into explicit knowledge. *Combination* allows the employees to systematise and exchange their newly acquired explicit knowledge and to convert existing knowledge into knowledge systems. Users often perceive the results of this process as *use of experience*.

Richardson (1995) created a model of “six building blocks”, which includes:
Systematic problem solution. Like Senge, Richardson highlights the needs for systematic problem solution.

Experimenting is the systematic acquisition and testing of new knowledge.
Learning from experience demands systematic storage and continual re-evaluation or assessment of success and failure. The aim of error analysis is not to assign blame, but rather to draw attention to mistakes in order to prevent them from happening again in the future. Success is not productive unless it is clear how it occurred in the first place.
Learning from others implies having an organisational culture which promotes the so-called enthusiastic borrowing of ideas. This includes systematic benchmarking with others in the same industry.
Transfer of knowledge is necessary if we are looking to learn something new, since it is difficult to achieve wisdom and become knowledgeable if we are passive.
Measuring progress allows for better process management.

Dimovski et al. (2005) claim that learning societies of the 21st century are based on equality, open access to information, loose hierarchies, wide scope of control and an organisational culture that promotes flexibility and team work. The FUTURE-O model (Dimovski et al. 2005) demands a comprehensive realisation of the idea of a learning organisation and emphasises the holistic nature and interconnectedness of all processes and employees in their transition from vertical to process-based organisational structure built on learning. Here, the psychological and social aspects are of a particular significance.

Our analysis was based on two hypotheses:

H1: There is a correlation between the perceived adaptations to subject curriculum and the academic success of student athletes.

H2: There is a correlation between the perceived features of a learning organisation at the level of school and the academic success of student athletes.

Method

Sample

An online survey was conducted through an online survey application 1KA during the period from 14 May to 21 May 2020. Invitation to participate in the survey was sent out on 14 May 2020 by the Slovenian Olympic Committee to email addresses of 328 high-school and university student athletes with the status of athlete (n=328) who were registered in the database of athletic scholarship recipients in the academic year 2019/2020.

152 of the invitees responded to the online survey. 90 respondents, 38 men (42.2%) and 52 women (57.8%) answered all of the questions. The statistical analysis only included fully answered questionnaires, 90 in all, as already mentioned above. The status of respondents from the sample is presented in Table 1.

Table 1. Status of sample respondents (n=90)

STATUS	Frequency	Percentage
high-school student	59	65.6
college student	3	3.3
student of first Bologna cycle	19	21.1
student of second Bologna cycle	4	4.4
other	5	5.6
TOTAL	90	100

Instrument

Our instrument for determining the value of variables was a survey questionnaire. The questionnaire only contained close-ended questions.

Dependent variable

Our dependent variable was the grade last obtained by the respondents or the grade achieved in subject they were last assessed in. In the table the variable is marked by GRADE.

The value range included:
1 – fail (grade 1 for high-school students, grades 1, 2, 3, 4, or 5 for university students);
2 – pass (grade 2 for high-school students, grade 6 for university students);
3 – fair (grade 3 for high-school students, grade 7 for university students);
4 – good (grade 4 for high-school students, grades 8 or 9 for university students);
5 – excellent (grade 5 for high-school students, grade 10 for university students).

In relation to the dependent value, the respondents were also asked opinion on:

- the amount of learning content, compared to non-athletes;
- assessment criteria, compared to non-athletes.

Independent variable: curriculum

The independent variables, i.e. curriculum attributes, included:

NAME OF VARIABLE	LABEL
e-learning	ELEAR
tutorship	TUTO
consultation	CONSU
adapted learning content	CONT
special learning material	MATE
schedule adaptations–extra time	XTRA
schedule adaptations	SCHE

The value of variables was measured with survey questions:

VAR	QUESTION: Have you perceived any subject adaptations related to
ELEA	methods of organisation and teaching—e-learning, specifically for high-school/university student athletes?
TUTO	methods of organisation and teaching—tutorship, specifically for high-school/university student athletes?
CONSU	methods of organisation and teaching—special consultations, specifically for high-school/university student athletes?
CONT	adaptations to learning content, specifically for high-school/university student athletes?
MATE	special instruction materials for teaching athletes (e.g. specific study materials, special web-pages dedicated to e-learning)
XTRA	the willingness of the teacher to devote special effort, e.g. extra time, in order for athletes to gain the necessary knowledge, skills, and habits and perform well in the subject?
SCHE	schedule adaptations for athletes?

The aim of the above segment of questions was to determine the frequency of perceiving individual curriculum attributes in the realisation of specific subjects. The respondents were explicitly instructed that this segment relates to the subject in which they were last assessed or where they last obtained a grade. The pre-provided answers described the following:

1	2	3	4	5
never	several times a month during the period spent revising for the subject	at least once a week during the period spent revising for the subject	several times a week during the period spent revising for the subject	every day during the period spent revising for the subject

Independent variable: learning organisation
The independent variables, i.e. attributes of a learning organisation, included:

NAME OF VARIABLE	LABEL
experience	EXPI
specific methods of working with athletes	METH
co-operation with sports associations	COOP
mental models related to everyday work with athletes	MENT
shared goal	GOAL
shared vision	VISI
teamwork	TEAM
systematic problem solution and systemic thinking	SIST
progress measurement	MEAS
personal mastery	MAST
shared values	VALU
different values	DIFE

The value of variables was measured with survey questions:

VAR	**QUESTION:** Have you perceived
EXPI	that the school as a whole has prior experience in working with athletes?
METH	that the school as a whole uses specific methods in working with athletes?
COOP	that the school as whole cooperates with sports associations?
MENT	that the employees of the school as a whole share a common mental model related to their everyday work with athletes?
GOAL	that the school as an institution is highly invested in you gaining the knowledge, skills, and habits necessary to successfully complete school?
VISI	that the employees of the school as a whole possess a shared vision related to working with athletes?
TEAM	that the school as a whole encourages teamwork related to working with athletes?
SIST	that the school as a whole promotes systematic problem solution and systemic thinking in working with athletes?
MEAS	that the school as a whole systematically measures your progress in education and the progress of other student athletes at school?
MAST	that the school as a whole has a particularly knowledgeable individual with special enthusiasm for educating athletes?
VALU	that the employees of the school share the same values and engage in same practices related to working with athletes?
DIFE	that the employees of the school possess different values and engage in different practices related to working with athletes?

The respondents were explicitly instructed that this segment of questions relates to their school as a whole (the institution which they are attending). The aim of the above segment was to determine the frequency of their perceptions, with the pre-provided answers describing:

1 never	**2** several times per year or less	**3** once a month or less	**4** several times a month	**5** once a week	**6** several times a week	7 every day

Results

Measuring dependent variable: results

The results of measuring the dependent variable are shown in Table 2. They show that athletes achieved relatively high grades (mean=3.58, median=4, std. dev.= 0.703). Even though the arithmetic mean of the grades achieved was high, none of the respondents obtained grade *excellent* during their last assessment. There were no statistically significant differences between men and women in grades achieved, which is shown in Table 3.

Table 2. Frequency and percentage of answers for the dependent variable (n=90)

GRADE	**Frequency**	**Percentage**
fail (grade 1 for high-school students, grades 1, 2, 3, 4, or 5 for university students)	2	2.2
pass (grade 2 for high-school students, grade 6 for university students)	5	5.6
fair (grade 3 for high-school students, grade 7 for university students)	22	24.4
good (grade 4 for high-school students, grades 8 or 9 for university students)	61	67.8
excellent (grade 5 for high-school students, grade 10 for university students)	0	0.0
TOTAL	90	100
mean=3.58, median=4, std. dev.= 0.703		

Table 3. T-test for the equality of means for dependent variable in relation to gender (n=90)

	GENDER	N	Mean	Std. Dev.	Std. Error Mean
GRADE	MEN	38	3.39	0.79	0.128
	WOMEN	52	3.71	0.605	0.084

	Levene's test for equality of variances		T-test for equality of means			
	F	Sig.	t	df	Sig. (2-tailed)	Mean difference
Equal variances assumed	6.755	0.011	-2.155	88	0.034	-0.317
Equal variances not assumed			-2.069	66.653	0.042	-0.317

82 out of 90 respondents (91.1%) believe that the amount of learning content is the same for athletes and non-athletes. Similarly, 84 out of 90 respondents (93.3%) believe that the assessment criteria are the same for athletes and non-athletes.

Because this is an opinion held by athletes, we also performed a t-test of arithmetic means for grades achieved by high-school student athletes and by university student athletes enrolled in programmes of the first Bologna cycle. The t-test of equality of means of grades achieved did not demonstrate statistically significant differences between grades in high school and grades in universities. This indicates that the assessment for athletes in high school and universities is realistic and that the grades achieved are likely an accurate reflection of actual knowledge.

Table 4. T-test for the equality of means for dependent variable in relation to status (n=90)

	STATUS	N	Mean	Std. Dev.
GRADE	high-school student	59	3.66	0.633
	student of first Bologna cycle	19	3.32	0.885

	Levene's test for equality of variances		T-test for equality of means			
	F	Sig.	t	df	Sig. (2-tailed)	Mean Diff.
Equal variances assumed	4.274	0.042	1.868	76	0.066	0.345
Equal variances not assumed			1.575	24.207	0.128	0.345

The descriptive statistics and the percentages of answers on the perceived adaptations to curriculum elements are shown in Table 5.

Table 5. Descriptive statistics and the percentages of answers on the perceived adaptations to curriculum elements (n=90)

	ELEA	TUTO	CONSU	CONT	MATE	XTRA	SCHE
1 (%)	36.7	44.4	46.7	61.1	65.6	35.6	44.4
2 (%)	23.3	23.3	17.8	11.1	12.2	22.2	20.0
3 (%)	18.9	14.4	16.7	7.8	12.2	16.7	15.6
4 (%)	11.1	12.2	10.0	12.2	5.6	10.0	11.1
5 (%)	10.0	5.6	8.9	7.8	4.4	15.6	8.9
TOTAL	100	100	100	100	100	100	100
Mean	2.34	2.11	2.17	1.94	1.71	2.48	2.2
Median	2	2	2	1	1	2	2
Std. Deviation	1.342	1.258	1.351	1.377	1.154	1.455	1.351

We have determined that there is a difference in the frequency of perceived adaptations between those elements of the curriculum included in the *Implementation plan for the national programme of sport in the Republic of Slovenia 2014–2023* (e.g. e-learning, extra consultations or individual assistance) and elements not mentioned in the document. The adaptations stipulated in regulatory acts are perceived more often than the ones not mentioned by them.

Special instruction materials (not included in the implementation plan as an individual measure) were provided every day to 1.71 respondents and never to 65.6% of respondents. On the other hand, e-learning was available *every day* to 10% of respondents and *never* to 36.7% of respondents.

The survey results indicate that there are no e-learning materials available for more than half of study units at school. On the level of individual subjects, up to 36.6% of school subjects have no online materials; 44.4% of respondents *never* took advantage of schedule adaptations; 46.7% *never* received consultations.

The correlation between academic success and the perceived adaptations to curriculum elements are presented below in Table 7.

Table 6. Descriptive statistics and the percentages of answers on the perception of attributes of a learning organisation (n=90)

	EXPI	MEH	COOP	MENT	GOAL	VISI	TEAM	SIST	MEAS	MAST	VALU	DIF
1 (%)	11.1	17.8	38.9	27.8	5.6	33.3	33.3	23.3	36.7	35.6	32.2	21.1
2 (%)	11.1	16.7	20.0	28.9	8.9	20	17.8	28.9	15.6	11.1	15.6	17.8
3 (%)	12.2	12.2	11.1	6.7	7.8	10	13.3	12.2	10	7.8	11.1	15.6
4 (%)	17.8	18.9	7.8	11.1	15.6	8.9	8.9	6.7	17.8	14.4	20	13.3
5 (%)	11.1	10	2.2	7.8	11.1	12.2	5.6	12.2	7.8	8.9	6.7	12.2
6 (%)	11.1	11.1	11.1	6.7	20	7.8	12.2	7.8	6.7	12.2	8.9	14.4
7 (%)	25.6	13.3	8.9	11.1	31.1	7.8	8.9	8.9	5.6	10	5.6	5.6
Total (%)	100	100	100	100	100	100	100	100	100	100	100	100
Mean	4.42	3.73	2.83	3.07	5.02	3.01	3.08	3.14	2.87	3.27	3.02	3.43
Media	4	4	2	2	6	2	2	2	2	3	3	3
Std. Dev.	2.07	2.02	2.08	2.06	1.90	2.02	2.09	1.98	1.90	2.17	1.90	1.92

The results indicate that the attributes of a learning organisation most frequently perceived by the respondents include:

- the school as an institution is highly invested in athletes gaining the necessary knowledge, skills, and habits to successfully complete school;
- the school as a whole has prior experience in working with athletes;
- the school as a whole uses specific methods in working with athletes.

31.1% of respondents answered that they perceive the school to be highly invested in athletes gaining the knowledge, skills, and habits necessary to successfully complete school *every day*; only 5.6% of respondents *never* perceived that.

25.6% of respondents answered that they perceive their school as a whole has prior experience in working with athletes *every day*; 11.1% of respondents *never* perceived that.

In contrast, the least frequently perceived attributes of a learning organisation perceived include:

- the systematic measuring of progress in education of student athletes at school;
- co-operation with sports associations.

68.9% of respondents answered that they *never* perceived the school as a whole co-operating with sports associations.

It is also noticeable that a large proportion of respondents *never* perceived some of the attributes generally considered to be the standard features of a learning organisation:

- shared mental model;
- teamwork;
- shared vision.

Given the nature of working with athletes, a greater frequency of these attributes would be expected.

The survey results also show that in some schools not all employees share the same values or engage in shared practices related to working with athletes. This finding is particularly worthy of further study.

The correlation between academic success and the perceived attributes of a learning organisation are presented in Table 9.

Table 7. The correlation between academic success and the perceived adaptations to curriculum elements. (n=90)

	GRAD	ELEA	TUTO	CONSU	CONT	MATE	XTRA
ELEA	0.061						
TUTO	0.041	.722**					
CONSU	0.087	.742**	.855**				
CONT	0.022	.606**	.782**	.730**			
MATE	0.014	.595**	.703**	.629**	.704**		
XTRA	0.134	.680**	.744**	.742**	.613**	.592**	
SCHE	0.078	.687**	.621**	.739**	.562**	.657**	.620**

** *Correlation is significant at the 0.01 level (2-tailed).*

A correlation analysis between academic success and the perceived adaptations to curriculum elements did not confirm a linear connection between success and curriculum adaptations. None of the curriculum elements were correlated to grades achieved. However, this does not imply that adaptations to curriculum elements do not affect success.

We conducted a t-test for equality of means for success in relation to e-learning, with students who had access to e-earning *every day* and students who *never* had access to e-learning. The results are shown in Table 8. High-school and university student athletes who had access to e-learning materials *every day* achieved better grades; the t-test revealed that the difference between the two groups of students is not a coincidence but rather a statistically significant difference.

Table 8. T-test for the equality of means for dependent variable in relation to e-learning (n=90)

	ELEA	N	Mean	Std. Dev.
GRADE	never	33	3.64	0.603
	every day during the period spent revising for the subject	9	3.78	0.441

	Levene's test for equality of variances		**T-test for equality of means**			
	F	**Sig.**	**t**	**df**	**Sig. (2-tailed)**	**Mean difference**
Equal variances assumed	2.021	0.163	-0.655	40	0.516	-0.141
Equal variances not assumed			-0.783	17.128	0.444	-0.141

A similar result was also yielded by t-tests for the equality of means for some of the other independent variables connected to subject curriculum adaptations. Respondents who answered they perceived the following adaptations *every day:*

- tutorship, specifically for high-school/university student athletes (TUTO);
- special consultations, specifically for high-school/university student athletes (CONSU);
- extra time devoted by teacher in order for athletes to gain the necessary knowledge, skills, and habits and perform well in the subject (XTRA);
- schedule adaptations for athletes (SCHE)

performed better in assessment than respondents who answered with *never*. The differences in above mentioned variables were statistically significant. Despite not confirming our hypothesis H1, we thus still proved that it is not unimportant whether someone enjoys the benefits of curriculum adaptations *every day* or *never*.

A correlation analysis between success and some of the perceived attributes of a learning organisation revealed statistically significant correlations. There was a statistically significant correlation between grade achieved during last assessment and the following variables:

- the school as a whole has prior experience in working with athletes (EXPI);
- the school as an institution is highly invested in athletes gaining the knowledge, skills, and habits necessary to successfully complete school (GOAL).

The significance of experience may be interpreted through the perspective of transfer of knowledge: it seems that schools with prior experience of working with athletes facilitate such inner transfer of knowledge. The inner transfer of knowledge is a typical characteristic of a learning organisation, described in depth by Nonaka and Takeuchi (1995) and Richardson (1995).

The perception that the school as an institution is highly invested in athletes gaining the knowledge, skills, and habits necessary to successfully complete school may be interpreted as the shared goal of all the employees at school. We found that 5.6% of the respondents *never* perceived a shared goal of all the employees at school, whereas 31.1% of the respondents perceived it *every day*.

Given the relatively high proportion of respondents perceiving a shared goal, the distribution of answers regarding some other attributes of a learning organisation is all the more surprising. It would be thus interesting to find out why—despite the perceived shared goal—

- 38.9% of the respondents *never* perceived co-operation with sports associations;
- 33.3% of the respondents *never* perceived teamwork.

Table 9. Correlations between academic success and the perceived attributes of a learning organisation

	GRAD	EXPI	METH	COOP	MENT	GOAL	VISI	TEAM	SIST	MEAS	MAST	VALU
EXPI	.224**											
METH	0.165	.870**										
COOP	0.066	.663**	.780**									
MENT	0.183	.704**	.774**	.676**								
GOAL	.309**	.489**	.435**	.387**	.411**							
VISI	0.082	.698**	.806**	.728**	.835**	.486**						
TEAM	0.137	.759**	.788**	.763**	.798**	.449**	.890**					
SIST	0.157	.724**	.735**	.639**	.794**	.433**	.736**	.807**				
MEAS	0.05	.653**	.701**	.664**	.722**	.474**	.732**	.750**	.759**			
MAST	0.148	.609**	.655**	.617**	.742**	.392**	.725**	.803**	.728**	.675**		
VALU	-0.01	.464**	.513**	.548**	.554**	.481**	.547**	.621**	.624**	.678**	.517**	
DIF	0.154	.518**	.596**	.506**	.564**	.289**	.510**	.548**	.542**	.548**	.635**	.341**

* Correlation is significant at the 0.05 level (2-tailed).
** Correlation is significant at the 0.01 level (2-tailed).

Conclusion

Prior to conducting our study we formulated two hypotheses:

- H1: There is a correlation between the perceived adaptations to subject curriculum and the academic success of student athletes.
- H2: There is a correlation between the perceived features of a learning organisation at the level of school and the academic success of student athletes.

The first hypothesis could not be confirmed by correlation analysis. The results of the correlation analysis demonstrated that academic success was not correlated to perceived adaptations in any element of the curriculum. However, the results of the correlation analysis do not imply that curriculum adaptations are insignificant.

Even though we could not confirm our first hypothesis, we can still conclude that curriculum adaptations in individual subjects affect the academic success of athletes. The t-test for equality of means showed that respondents who *never* used adaptations received poorer grades than respondents who used them *every day*; this is true for the following variables:

- access to e-learning materials (ELEA);
- tutorship, specifically for high-school/university student athletes (TUTO);
- special consultations, specifically for high-school/university student athletes (CONSU);
- extra time devoted by teacher in order for athletes to gain the necessary knowledge, skills, and habits and perform well in the subject (XTRA);
- schedule adaptations for athletes (SCHE).

Our analysis was unable to determine the effect of curriculum adaptations on whether a student athlete receives a positive or negative grade. Only two students in our sample received a negative grade in their last assessment, i.e. too few for us to conduct additional statistical analysis.

Our second hypothesis (H2) was confirmed. There is a correlation between the perceived features of a learning organisation at the level of school and the academic success of student athletes. There was a statistically significant correlation between grade achieved in last assessment and the following variables:

- the school as a whole has prior experience in working with athletes (EXPI);
- the school as an institution is highly invested in athletes gaining the knowledge, skills, and habits necessary to successfully complete school (GOAL).

It is thus safe to conclude that adaptations in organisation on the level of school as a whole affect the academic success of athletes.

The regulatory framework in Slovenia (*Sports act, Resolution on the national programme of sport of the Republic of Slovenia 2014-2023,* the *Implementation plan for the national programme of sport of the Republic of Slovenia 2014-2023*) specifies a number of curriculum adaptations for student athletes, for example:

- e-learning;
- tutorship;
- additional instruction–individual assistance.

In relation to this, our survey focused on subjects in which the athletes were last assessed. We determined that during their last assessment a large proportion of student athletes did not take advantage of these adaptations:

- 36.7% of respondents *never* benefited from e-learning;
- 44.4% of respondents *never* benefited from tutorship.

These numbers refer to specific subjects, which is why the teachers instructing them are directly responsible for the situation.

Because our survey was conducted within the framework of the *Athletes Friendly Education* project, whose main goal is to establish a system of accreditation, we would like to conclude by proposing some guidelines useful in the evaluation of schools.

Adaptations to curriculum elements should be a necessary part of the evaluation. We believe that this feature can be best evaluated by measuring the proportion of students using the adaptations and the frequency of their use. Each further evaluation should then measure progress.

As already mentioned above, our study exposed the absence of some of the common features of learning organisations. Due to the limited scope of our investigation, we could not determine the reasons for this situation. In terms of evaluating schools from the perspective of learning organisations, evaluations should focus on the management of knowledge within schools. Our analysis showed a correlation between the perceived prior experience of school in working with athletes and the grades received, which implies that all experience within a school affects individual subjects. This highlights the importance of interactions within a given school and the inner transfer of knowledge and experience. It therefore follows that evaluations should also focus on the interactions between the individual elements of the system within a school. For the same reason at least the following attributes of learning organisations should be developed:

- **Learning from experience** demands systematic storage and continual re-evaluation or assessment of good practice and of bad practice (in order to prevent it from happening again in the future). Success is not productive when it is unclear how it appeared in the first place.
- **Transfer of knowledge** within an organisation is necessary if we are looking to maintain existing knowledge and create new knowledge.

Evaluations should aim to encourage the development of other attributes of learning organisations.

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Developing e-learning courses

E-learning courses using different learning platforms are becoming indispensable in today's teaching process in the business or education sector. In the paper, the primary three components needed for developing an e-learning course are presented. First, e-learning is described. Its benefits and drawbacks are presented. Then the ADDIE model for designing an e-learning course is described. It consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. These five stages represent a dynamic, flexible guideline for building practical training and performance support tools. After the professional or team roles needed in an e-learning project are presented. In the end, the technology required to produce and deliver e-learning content with a particular emphasis on learning platforms (learning management systems) is described.

Introduction

The internet is a technological development that has the potential to change not only the way society retains and accesses knowledge but also to transform and restructure traditional models of education, particularly the delivery and interaction in and with course materials and associated resources. Utilizing the internet to deliver e-learning initiatives has created expectations both in the business market and in higher education institutions (Wani, 2013).

Technology has forever changed the way education is delivered. The classroom no longer refers to a physical location, and students can learn from an environment they are comfortable in. E-learning has changed the way students think about education and pursue their degrees. Nowadays, it has become easier to receive a degree or certificate online. Students no longer need to commute to a classroom and are often able to learn at their own pace. All they need is an internet connection to access the lessons and course material. Online learning has been rapidly adopted due to wide-spread access and the many benefits it offers (Ayers, 2018).

E-learning courses are revolutionizing formal education and have opened a new genre of outreach on cultural and scientific topics. These courses deliver a series of lessons to a web browser or mobile device to be conveniently accessed anytime, anyplace. In eLearningNC (2019) e-learning is defined as courses that are specifically delivered via the internet to somewhere other than the classroom where the professor is teaching. It is interactive in that the learner can also communicate with the teachers, professors, or other students from class. Sometimes it is delivered life, where one can “electronically” raise a hand and interact in real-time, and sometimes it is a lecture that has been pre-recorded. There is always a teacher or professor interacting/communicating and grading participation, assignments, and tests.

Next in the paper, e-learning with its benefits and drawbacks is presented. Then the ADDIE model for designing an e-learning course is described. After the professional or team roles needed in an e-learning project are given. In the end, the technology required to produce and deliver e-learning content with a particular emphasis on learning platforms is described.

What is e-learning?

In essence, e-learning is a computer-based educational tool or system that enables you to learn anywhere and at any time. Today e-learning is mostly delivered through the internet, although in the past, it was produced using a blend of computer-based methods like CD-ROM (Epignosis LLC, 2014). Beal (2019) defines e-learning according to Learnframe: e-Learning Management System as education via the internet, network, or standalone computer. E-

learning is essentially the network-enabled transfer of skills and knowledge. E-learning refers to using electronic applications and processes to learn. E-learning applications and processes include Web-based learning, computer-based learning, virtual classrooms, and digital collaboration. Content is delivered via the Internet, intranet/extranet, audio or videotape, satellite TV, and CD-ROM. E-learning was first called "Internet-Based training," then "Web-Based Training." Today these terms are still being used, along with variations of e-learning such as e-learning, Elearning, and eLearning.

E-learning refers to the use of information and communication technologies to enable access to online learning/teaching resources (Abbad, Morris, & de Nahlik, 2009). In its broadest sense, they defined e-learning to mean any learning that is enabled electronically (Arkoful & Abaidoo, 2014). Normark and Cetindamar (2005) describe e-learning as the ability of a system to transfer, manage, support electronically, and supervise learning and learning materials. According to the Higher Education Funding Council of England (2005), e-learning is defined as information and communication technologies used to support students to improve their learning. In Tavangarian, Leypold, Nölting, Röser, and Voight's (2004) review of the literature, e-learning is "all forms of electronically supported learning and teaching, which are procedural in character and aim to affect the construction of knowledge regarding individual experience, practice, and knowledge of the learner. Information and communication systems, whether networked or not, serve as specific media to implement the learning process". According to eLearningNC (2019), understanding e-learning is simple. E-learning is learning utilizing electronic technologies to access educational curriculum outside of a traditional classroom. In most cases, it refers to a course, program, or degree delivered entirely online.

The benefits and drawbacks of e-learning

E-learning should aim to be equivalent to or better than learning provided through other delivery modes, such as the traditional face-to-face and classroom-based methods of instruction (Valsamidis et al., 2014). Some authors present e-learning as being advantageous to non-traditional students (Allan, O'Driscoll, Simpson, & Shawe, 2013). According to Hu and Hui (2012), e-learning has some advantages, such as geographical reach, learner control, cost-effectiveness, control over students' activities, and more. Whether you're a high-school teacher looking to engage your students more interactively, or a corporate trainer hired by a large company to design training curricula, e-learning packs a punch when it comes to benefits that make the creation and delivery processes more manageable and hassle-free (Epignosis LLC, 2014).

According to Epignosis LLC (2014), the main benefits of e-learning are:
No boundaries, no restrictions. Along with locational restrictions, time is one of the issues that learners and teachers both have to face in learning. In the

case of face-to-face learning, the location limits attendance to a group of learners who can participate in the area, and in the case of time, it limits the crowd to those who can attend at a specific time. E-learning, on the other hand, facilitates learning without having to organize when and where everyone interested in a course can be present. According to Dudley (2016), you can also call it *flexibility*. E-learning content can be done in sections to fit around busy schedules. Unlike traditional training, you don't have a structured plan to dictate when you access your e-learning content. E-learning gives you full flexibility to accomplish your development in your own time. Instead of the confinement of a traditional training room, you have the flexibility to learn in any location you'd like, including on a train or a plane. E-learning allows you to take full advantage of your time and get things done when you wouldn't usually be able to.

***More fun*.** Designing a course in a way that makes it interactive and fun through the use of multimedia or the more recently developed methods of gamification enhances not only the engagement factor but also the relative lifetime of the course material in question.

Cost Effective. This is directed to both learners and teachers, but there is a good chance that whatever your role, you had to pay exorbitant amounts of money at some point to acquire updated versions of textbooks for school or college. While textbooks often become obsolete after a certain time, the need to continually receive new editions is not present in e-learning. Dudely (2016) also sees *lower cost* as a great benefit of e-learning. E-learning allows one to learn from anywhere. Since a trainer's time or equipment is not being used, online learning becomes a much more affordable option. Except for your setting or students' computer or mobile device, there are generally not many other expenses.

It just fits! As companies and organizations adopt technologies to improve the efficiency of day-to-day operations, the use of the internet becomes a necessity. As multinational corporations expand across the globe, the chances of working with people from other countries increases, and training all those parties together is an issue that e-learning successfully addresses. Dudely (2016) says it is *global*. With very few restrictions, companies can be confident that their staff can receive the same content regardless of their location, and in many cases, their nationality. Therefore if you wish to provide the same training or have your staff understand and use standard methodology, e-learning is a useful way of ensuring this happens with ease and reduced costs. According to Fiorello (2019) also, students can deal with teachers who are highly qualified but cannot reach because of distance barriers. Now with e-learning coming in the scene, they can give their inputs and help students in their research.

Let's blend all of that and apply it in a real-life scenario: To enhance the credibility of course material, often, a professor will summon a field specialist to give a lecture relevant to the topic at hand. In the traditional model of education, the professor would have to extend an invitation to said expert and incur the costs of his flight, stay, and training. With e-learning, the professor can host a guest lecture without having to spend much money. It can be done virtually, with cameras for both the lecturer and the students, and with the use of microphones

to facilitate the same level of interaction that would be possible if the lecturer were physically present in the room. The added benefit comes in when we can replay the lecture and gain even more out of it. Students that missed out can view the recording, or students that attended can watch it again to further their understanding.

According to Dudely (2014), we can also add the next benefits to e-learning:

Tailor it to you. E-learning courses aren't confined to try and suit the needs of the majority. If you feel you already know a particular area well and don't need to spend a great deal of time on it again, then you can skim over it and concentrate that time on something you feel you need to work more at. Everyone can learn at their own pace – a massive factor that only e-learning can provide for. Puri (2018) says that e-learning offers personalization. Each learner has unique preferences and learning goals. E-learning makes it possible to cater to individual needs.

Technological possibilities. E-learning is fast becoming a more popular training method, and there are large investments in further improvements. The computer-based nature of training means new technology is being introduced all the time to help with the learning. Different applications are helping to reinforce further the learning while on-line forums and webinars can be used to significantly increase the amount of interaction and engagement between learners.

Puri (2018) adds to the above written:

E-learning leads to better retention. Modern learners prefer bite-sized, interactive content. They would rather watch a video or listen to a podcast than read through pages of a manual. E-learning tools enable learning designers to make content interactive. The more engaging the content is, the better the learners remember information. If they enjoy learning, they can able to recall and apply the concepts.

E-learning is consistent. In face-to-face sessions, every instructor has his or her method of teaching. Each varies in approach and style and is susceptible to mistakes. You can eliminate these issues with e-learning. Online learning provides consistent and standardized training every time. Each learner goes through the same experience regardless of when and where he or she takes the course.

To sum up, we can say e-learning is your schedule, your pace, your place. If you can maintain the necessary self-discipline, the benefits of e-learning are almost too numerous to count. You can cover the material when you have time, go over it as often as you need, all without traveling to the classroom. There are no parking problems or expenses, transportation fees, athletic fees, housing, and food service fees, plus you can take the class from any location with internet access. There have been many studies showing that e-learning students retain the material to a significantly greater degree than face-to-face instructor-led courses. The content delivery is consistent and can be easily repeated if needed to gain a better understanding (eLearningNC, 2019).

Nevertheless, e-learning has its drawbacks and limitations as well. According to a significant study by Singh and Hardaker (2014), there are barriers and obstacles in using e-learning. Despite the advantages provided by e-learning, there are many dangers of e-learning, for instance, limited social interaction, technology problems, quality of the content, and more (Hu & Hui, 2012). All the negative aspects related to e-learning have their reasons, which originate from different affairs. Poorly made and implemented e-learning harms the satisfaction, engagement, effectiveness, and efficiency of participants in an educational process (Pintar, Jereb, Vukovič, & Urh, 2015).

According to Dudely (2016), the following concerns arise with e-learning:
Lack of structure. Sometimes learners with low motivation can quickly fall behind in an online course. With no fixed schedule or routine, e-learning can become difficult for people to meet specific deadlines or goals.
Adaptability struggle. Switching from traditional, face to face instructor training to computer-based training in a virtual training room makes the learning experience entirely different for students. Resistance to change makes it difficult for them to adapt to the online learning environment. It also takes time for them to get accustomed to the methods of computer-based education. Students with a "traditional" mindset may find it difficult to adapt; however, understanding the benefits of e-learning may change their mindset and better prepare students for online learning.
Technology issues. It is essential to ensure the computer they are using meets the technological requirements for their course. Learners need to have devices that are compatible with e-learning software. There is always an additional risk of having technical issues when using computers, such as poor internet connection.
Computer proficiency. Some learners may not be comfortable using computers, and all learners will need to have basic computer literacy as a minimum. Even if the software is user friendly, it may be a daunting task for some. These particular learners may struggle, and even with support, they would probably be more successful in a traditional face to face session until they feel confident with IT.
Time management. Time management can be a difficult task for e-learners as online courses require time and periods of intensive work, which require concentration. Many do not complete their courses due to their various everyday commitments, both at work or at home. According to Tom (2017), online courses usually have deadlines for assignments, tests, commenting on lectures, etc. That's not the problem. The problem is the time management and organization skills necessary to stay on top of work, allot an appropriate amount of time for completing each task, and balance coursework against other priorities in one's life.
Self-motivation. Among frequently discussed disadvantages of e-learning belongs to the insufficient motivation of student's disability of independent work and its organization or even independent learning. An individual study is a common practice in e-learning. The student could feel isolated, lonely

(Maněnová, 2015). Self-motivation is an essential e-learning requirement. After enrolling in distance learning courses, many learners fall behind due to a variety of reasons, including lack of appropriate support, technical or software issues, conflicting pressures on their time. Students need to find the motivation to adapt to new educational methods and also correctly equip themselves for future challenges in their education and careers.

Cheating. It is relatively easy to cheat with on-line, particularly if learners are completing their course at home or unsupervised. Even when they receive a certificate of achievement, there is no guarantee that someone on their behalf has not completed the course.

Even given all the benefits of e-learning, one cannot deny there are some drawbacks. Practical skills are somewhat harder to pick up from online resources. For example, although building a wooden table is something you can easily share information about, record videos of, and explain, the practical experience is essential. Pottery and car engineering are examples of skills that require hands-on experience (Epignosis LLC, 2014).

Isolation. Though e-learning offers ease, flexibility, and the ability to access a classroom in the student's own time remotely, learners may feel a sense of isolation. This is because learning online is a solo act for the most part, which may give the learner the feeling that they are acting entirely alone. As technology progresses and e-learning benefits from the advancements being made, learners can now engage more actively with professors or other students using tools such as video conferencing, social media, and discussion forums, amongst others.

Health-Related Concerns. E-learning requires the use of a computer and other such devices; this means that eyestrain, bad posture, and other physical problems may affect the learner. When running an online course, it's a good practice to send out guidelines about correct sitting posture, desk height, and recommendations for regular breaks (Epignosis LLC, 2014).

James (2015) adds to the described drawbacks also:

Good e-learning is challenging to do. Developing a useful e-learning course takes time, money, and a significant amount of expertise. The right e-Learning course involves multimedia, custom web development, technical support, and strong User Interaction design. Although the market is improving, many of the first e-learning courses were clunky and unwieldy, and the technical and design problems negatively impacted the learning process. With live training, the standard systems, procedures, and best practices are far more established and well understood. The best practices for e-learning courses are still evolving and are a lot trickier to get right.

No peripheral benefits. When you bring together a team of people to be trained with subject matter experts, you set the stage for something more than just essential learning. If structured right, the dynamics of personality, intelligence, vision, and creativity all intertwine to create a group that is more than the sum of its parts. Group situations can produce solutions to core business problems and bring about massive transformations - mainly because of the sheer energy that is produced by the environment of a team that has come together for a

single purpose. Similarly, live training can foster team-building and create an environment where individuals deepen their relationships, get to know each other better, and learn in a unique environment where they all have the same goal. When done correctly, training is about much more than just pushing new information into individuals' heads.

Developing an e-learning course

Besides the technology to create e-learning material and make it accessible to learners, a series of activities performed by a team is required to develop an e-learning course. In the 21st century, educators are utilizing emerging technologies to develop not only knowledge of graduates but also their soft skills to enhance their competencies that meet employers' requirements. Although technology is seen as an essential enabler for improving student-learning outcomes, to get the most significant value from technology, best practices of learning design are required (Nadiyah & Faaizah, 2015). By instructional designers and training developers, the ADDIE model for instructional design is traditionally used. It consists of five stages: Analysis, Design, Development, Implementation, and Evaluation. These five stages represent a dynamic, flexible guideline for building practical training and performance support tools. The team of professionals has to cover the following roles which are generally required at different stages of the process: project manager, instructional designer, subject matter expert, course authoring specialist, learning management system specialist, graphic designer, information technology support specialists, quality assurance tester, course administrators, online facilitators, and tutors.
In the following chapters, the three components needed for developing an e-learning course are presented:

- instructional design (ADDIE model),
- team of professionals and
- e-learning technology.

ADDIE model – e-learning course instructional design
By most instructional designers, the ADDIE model framework is used (see Morrison, 2010). It has a flexible guideline that helps the instructional designers in building useful support tools in five phases called Analysis, Design, Development, Implementation, and Evaluation. Among the improvements made in this model is the rapid prototyping (Ahmad, 2013). It allows feedback based on continuous assessment throughout creating materials. The ADDIE model relies on each stage being done in the given order but with a focus on reflection and iteration (Figure 1). The model gives you a streamlined, focused approach that provides feedback for continuous improvement (Quigley, 2018).

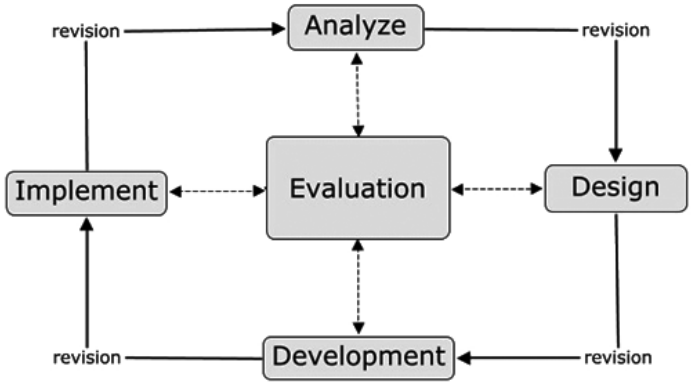

Figure 1. ADDIE model (https://en.wikipedia.org/wiki/ADDIE_Model)

Analysis phase. In the analysis phase, the instructional problem is clarified, the instructional goals and objectives are established, and the learning environment and learner's existing knowledge and skills are identified. Below are some of the questions that are addressed during the analysis phase (Culatta, 2019):

- Who are the audience and their characteristics?
- Identify the new behavioral outcome?
- What types of learning constraints exist?
- What are the delivery options?

This phase should be a full audit of the audience, business goals, training methodologies used, media types used, etc. Once this is done, you can generate a training plan that addresses (Quigley, 2018): Who, What, When, Where, Why, How?

Design phase. The design phase of ADDIE is where all the information accumulated in the previous phase is used to define an approach to teaching the desired materials to learners. ADDIE design is a systematic method for putting various teaching tools in place to create an overall approach to individual lessons and subject matter as a whole. In the ADDIE model design phase, concrete components of the training plan are defined (Lessonly, 2019):

- Learning objectives, which are similar to instructional objectives, but detail what the student should learn rather than what the materials should teach (for instance, if you want to teach the use of a program, the students should learn to boot it up, open files, perform tasks, save files, etc.).
- Assessment instruments or what you will use to ensure student learning is on track (i.e., written tests, reflections, performance tests).
- Content and exercises.
- Lesson planning.
- Media selection, or how you will get the information to the student.

Development Phase. The development phase is where the developers create and assemble the content assets that were made in the design phase. Programmers work to develop and integrate technologies. Testers perform debugging procedures. The project is reviewed and revised according to any feedback given (Culatta, 2019). The ADDIE development phase is a foundational step in the process, ensuring that the information gathered in the analysis phase and utilized in the design phase is adequately transmitted to students in the implementation phase. In many ways, the entire ADDIE model hinges on this step. It is essential that designers are systematic when transferring designs to the actual content, graphics, and materials. In a nutshell, ADDIE development includes (Lessonly, 2019):

- Creating the actual content that learners will receive throughout the course of instruction.
- Creating storyboards of how content will be presented.
- Building out exercises and other materials that students will use to aid in their learning.
- Creating e-learning materials, if distance or online learning is involved.
- Building the technological platforms that will be used.
- Planning for and integrating all technology intended for inclusion in the training program.

Implementation phase. Once the courses are completed and fully tested, it's time to share them with the learner. The decisions made in the design phase will influence how this is actually carried out. In the majority of cases, the courses are uploaded to an LMS, and the delivery options are set up - who are enrolled, how much time they are given, pass marks for assessments, and the collection of feedback. The delivery, tracking, and reporting are all handled by the LMS. The instructional designer should monitor the situation for any teething issues. One of the best to prevent any problems in the implementation phase is to conduct a pilot of a course before unleashing the content on the entire group (Quigley, 2018). At the end of this phase, courses should be live in the LMS, and learners can start to take and complete courses.

Evaluation. The last stage of the ADDIE method is Evaluation. This is the stage in which the project is being subjected to meticulous final testing regarding the what, how, why, when of the things that were accomplished (or not accomplished) of the entire project. This phase can be broken down into two parts: formative and summative. The initial evaluation happens during the development stage. The formative phase happens while students are conducting the study, while the summative portion occurs at the end of the program. The main goal of the evaluation stage is to determine if the plans have been met and to establish what will be required moving forward to further the efficiency and success rate of the project (Kurt, 2017).

Team professional roles in developing an e-learning course

Participation in e-learning projects requires capabilities in certain areas - such as technology and media-related skills - that are not essential in traditional education or training (Ghirardini, 2011). Team roles described below are usually required to perform the needed activities for developing an e-learning course.

Project Manager/Team Leader. The team leader ensures that everything runs smoothly and serves as a go-between for all team members and stakeholders. If there is a problem, the eLearning project manager is there to discuss possible solutions with the team or takes it upon themselves to remedy the situation, depending on the nature of the obstacle. This is the individual who propels the eLearning project forward and keeps everyone on track and focused on the common goal. This individual must be an excellent communicator and self-starter. Motivation is essential in any eLearning project, and the leader is there to provide inspiration and motivation to the eLearning team (Pappas, 2015).

Instructional Designer/Writer. ID uses instructional design, cognitive psychology, and adult learning theory to determine the appropriate solution to a knowledge or performance gap. ID analyses content, organizes content, designs solutions, and writes storyboards, scripts, performance support, mobile learning, and manuals. This individual knows how to use social media and collaborative tools to facilitate learning (Malamed, 2014).

Subject Matter Expert. This is the individual who is in-the-know about what needs to be included in the eLearning course and what can be left by the wayside. In many cases, a different subject matter expert is used for every eLearning course, unless you find an expert who specializes in a variety of different subjects. They will typically work closely with the Instructional Designer to determine the key takeaways and learning objectives of the eLearning course, as well as how the online content should be conveyed. Since the subject matter expert will be working directly with every member of the team at one time or another, it's essential to find one who can communicate effectively and collaborate well with other eLearning pros (Pappas, 2015).

Course Authoring Specialist. They are highly skilled experts who work on authoring tools such as Articulate Storyline, Adobe Captivate, iSpring, Lectora, and others. Based on the training requirements, nature of content, multilingual requirements, and available development time, these experts leverage the benefits of these tools. They develop the storyboard designed by the ID team and bring out engaging and immersive e-learning by including multimedia elements, layouts, navigations, and screens (Puzhakkal, 2018).

Learning Management System Specialist. Once the Course Authoring Specialists take care of their part, they hand it over the LMS Specialist, who is in charge of the infrastructure of the learning management system. The LMS is the tool that will be used to deliver the eLearning course to learners. As such, the LMS Specialist must ensure that the eLearning course uploads correctly and that every element is in the right place. For example, the online scenario that walks learners through the process of repairing an air conditioning unit should be directly after the tutorial that details every step in the process (Pappas, 2015).

Graphic designer. Creates the user interface, graphics, and animations; designs the look and feel of courses, learning portals, mobile learning, and print materials with an eye toward the clarity required for learning and information dissemination (Malamed, 2018). Graphic designers work with both text and images. They often select the type, font, size, color, and line length of headlines, headings, and text. Graphic designers also decide how images and text will go together on a print or webpage, including how much space each will have (Truity, 2017). They may also be in charge of producing the eLearning videos and scenarios, as well as any other highly interactive elements within the eLearning course design (Pappas, 2015).

Information technology (IT) specialist. IT manages all the technical aspects of e-learning, including hosting, learning management systems, sign-on security, etc. This individual assists both producers and users of e-learning courses at every stage of the process.

Quality assurance (QA) tester. The quality assurance role assures that the e-learning developed meets the requirements and specifications set out for the project (Nasta, 2012). The QA Tester is the last line of defense that keeps navigation errors, typos, and any other unsavory elements out of the final eLearning course deliverable. They run numerous quality assurance tests to verify that every aspect of the eLearning course is on-point, from the text to the interactive scenarios and images. In some cases, a secondary line of quality assurance checks can also be conducted using actual learners who lookout for any glitches or errors that may have been missed (Pappas, 2015).

Course administrators, online facilitators and tutors. These are the roles involved in the implementation stage. Course administrators manage learners' subscriptions. Online tutors and facilitators support participants' learning activities and motivate learners during the course. They create an environment that inspires participants' confidence in the learning process, assure the flow of information among the different stakeholders, motivate participation, and facilitate and mediate participants' exchanges (Ghirardini, 2011).

E-learning technologies and tools

E-learning makes use of many technologies - some of which have been developed specifically for it, while others conveniently complemented the learning process, for example, computer games. Communication technologies are also widely used in e-learning. Starting with the use of email and instant messaging, message forums, and social networks.

Some technologies work in a complementary manner to other software and enable new features, for example, software that adds a whiteboard on video conferencing tool to allow you or your peers to make changes on other people's work for review, or screen-sharing which allows someone to make a presentation while still making comments and giving input using the microphone.

E-learning makes good use of database and CMS (Content Management System) technologies. These two work hand in hand to store the course content,

test results, and student records. The data is stored in the database, and the CMS provides a user interface to add, update, and delete data. A good LMS (Learning Management System) will often provide reporting tools to generate and store progress reports.

Technologies to improve the quality of content are manifold. Software such as Flash and PowerPoint will help make presentations slick and interesting, with high quality, graphically rich content. There are word processing packages and HTML editors available these days that make formatting a text or web pages a breeze, removing a lot of the complexity. There are also lots of online services available that can be used to create interactive elements for courses such as quizzes and games (Epignosis LLC, 2014).

Bellow e- technologies and tools which can be used in e-learning are described.

Communication tools. Synchronous and asynchronous communication tools are used to facilitate collaboration between individuals and groups of people and are particularly useful for e-learning environments. Synchronous communication occurs in real-time and can take place face-to-face, and as technology has evolved, it can take place irrespective of distance. Asynchronous communication is not immediately received or responded to by those involved. To enhance collaboration between people, many software applications offer a blend of synchronous and asynchronous technology (Kask, 2009).

Sharing and collaboration. Working online means we often have files we want to share with teammates or clients. While emailing attachments is still a popular choice to send files, it has restrictions on file size. It's also not conducive to collaboration, as it doesn't allow for multiple people to work on the same file at once. Instead of overflowing email inboxes with attachments, we can make use of a variety of file-sharing tools, all cloud-based, with many including storage facilities to track your transfers. These tools also save you from the setup, cost, and maintenance of running your home server (VPN), and make it easy to upload files to share with friends or colleagues, access remotely (on any device), or store for later (Smith, 2014).

Digital repositories. This category covers a plethora of different content management systems and the search engines that index them. Digital repositories typical in higher education incorporate online bibliographic databases that provide abstracts and indexing to the world's scientific and technical papers in wide-ranging disciplines (Craig, Coldwell-Neilson, Goold, & Beekhuyzen, 2012).

Assessment tools. Tools for formative and summative assessment being used in higher education include quiz and survey tools, eExaminations, and those for visualization and activity development. Such tools are found to encourage student learning and enable a better understanding of student behavior in teaching environments (Craig, Coldwell-Neilson, Goold, & Beekhuyzen, 2012). According to Legault (2019), today's e-learning authoring software can make

it easy to incorporate assessments into online training. These software applications typically allow you to pick your question type, then fill in the information for the question, possible answers, and feedback given to the learner for a correct and incorrect answer. This makes the whole process of designing e-learning assessments easy, even if you aren't a computer whiz.

Image or photo-sharing is the publishing or transfer of a user's digital photos online. Image sharing websites offer services such as uploading, hosting, managing, and sharing of photos (publicly or privately) (Aichner & Jacob, 2015). This function is provided through both websites and applications that facilitate the upload and display of images. The term can also be loosely applied to the use of online photo galleries that are set up and managed by individual users, including photoblogs. Sharing means that other users can view but not necessarily download images, and users can select different copyright options for their images (https://en.wikipedia.org/wiki/Image_sharing#cite_note-dibiash_raita-1).

Podcasts and streaming. A podcast is a unique audio or video recording that is released in installments as part of a series. Podcasts are typically downloaded directly to a computer for listening on a computer or external media device like an MP3 player. Some files can be copied to a CD or DVD for play in a CD player or DVD player, respectively. To stream media is to listen or view multimedia directly from the Internet. You don't download the audio file to your machine; instead, the file is downloaded from a host server in real-time. All you need is a web browser, a high-speed Internet connection, and any of the latest plug-ins needed to play the file (Thompson, 2019).

Social bookmarking is an online service that allows you to create and publicly share website bookmarks with other members of a community by simply tagging a web page with a web-based tool so you can easily access it later. Instead of saving them to your web browser, you are saving them to the web. And, because your bookmarks are online, you can easily access them anywhere you have an internet connection and share them with friends (Nations, 2019).

Social networking. Social networking creates online communities where people share interests and activities. Users are able to choose how they are "seen" within this community by creating profiles for themselves and can choose what information they wish to share (Craig, Coldwell-Neilson, Goold, & Beekhuyzen, 2012). A virtual community or profile site or a social network is a website that brings people together to talk, share ideas and interests, or make new friends. This type of collaboration and sharing is known as social media. Unlike traditional media that is created by no more than ten people, social media sites contain content created by hundreds or even millions of different people (Computer Hope, 2019).

Subscribed content delivery. RSS, short for Really Simple Syndication or Rich Site Summary, provides a means of keeping up-to-date with the content on the Internet that is updated frequently. It allows content distributors to syndicate content via an RSS file on the Web (Glotzbach, Mohler, & Radwan, 2009), which an RSS reader can then easily download and check for updates.

Individuals who subscribe to an RSS feed are notified when new items are added. The newsreader is accessible via the Internet, desktop computer, an email client, or mobile phone. The feed is in a standardized format, which allows it to be published once and viewed by many different programs (Craig, Coldwell-Neilson, Goold, & Beekhuyzen, 2012).

Blogs and microblogs. A blog is a journal of ideas, or a diary published online without a character limit, the owner of the blog has the freedom to express his opinion about one or more topics. It provides you with a personal online space in which you can write and publish texts, also known as posts, which may also contain things such as hyperlinks and images. The posts are ordered chronologically, so they are shown from newest to oldest. The blog creator can control user's comments, and they can also enable their blog to be followed by others, which means that people who follow it will receive notifications whenever the blog owner posts a new entry into their blog, they will most likely receive an e-mail. Microblogging, which is also known as nano blogging is a service that enables its users to publish short messages (roughly around 140 characters) usually only consist of text and regular responses to questions such as 'how are you' 'what are you doing' 'what do you find interesting' etc. The updates are displayed on the user's profile page and are also immediately sent to other users who have chosen the option of receiving them (Jack's blog, 2014).

Wiki. A wiki is a Web site that allows users to add and update content on the site using their Web browser. This is made possible by Wiki software that runs on the Web server. Wikis end up being created mainly by a collaborative effort of the site visitors. The term "wiki" comes from the Hawaiian phrase, "wiki wiki," which means "super-fast" (TechTerms, 2019). The online encyclopedia project Wikipedia is the most popular wiki-based website, and is one of the most widely viewed sites in the world, having been ranked in the top ten since 2007. Wikipedia is not a single wiki but rather a collection of hundreds of wikis, with each one pertaining to a specific language. In addition to Wikipedia, there are tens of thousands of other wikis in use, both public and private, including wikis functioning as knowledge management resources, notetaking tools, community websites, and intranets (https://en.wikipedia.org/wiki/Wiki#cite_note-Alexa_Top_Sites-3).

Virtual Worlds. A virtual world is a computer-based simulated environment that may be populated by many users who can create a personal avatar and simultaneously and independently explore the virtual world, participate in its activities, and communicate with others (Aichner & Jacob, 2015). These avatars can be textual, two or three-dimensional graphical representations or live video avatars with auditory and touch sensations. In general, virtual worlds allow for multiple users, but single-player computer games, such as Skyrim, can also be considered a type of virtual world (Bell, 2008).

Management and administration tools. Tools that are used for teaching and the management of students and their learning include those tools used for administration of students' grades and reporting of student progress and tools for the detection of plagiarism. Also included here are tools to support the building of groups and provision of infrastructure to support group work such as

private discussion spaces and shared document spaces (Craig, Coldwell-Neilson, Goold, & Beekhuyzen, 2012). These systems will be described more into detail in the next section.

Some examples of mentioned e-technologies are shown in Table 1.

Table 1. E-technologies and tools used in e-learning

E-learning technologies and tools	Examples
Communication	Asynchronous: Email, Announcements, Discussion forum, SMS Synchronous (and asynchronous): Chat, Skype, Messenger, WhatsApp, Viber
Sharing and collaboration	Google Docs, Basecamp, Doodle, Pidgin, Dropbox, YouSendIt, SugarSync, Dropmark, Dropsend
Digital repositories	Google Scholar, ePortfolio, PubMed, IEEE Xplore, Scopus, Web of Knowledge, Web of Science
Assessment	QuizPedia, Moodle, ClassMarker, Proprofs, Learningpod, Testmoz, Socrative, Qizizz
Image or photo sharing	Photobucket, Flickr, 500px, Canon Irista, SmugMug, Google Photos
Podcasts and streaming	Podcast, iLecture, iTunesU, MyPod, ePodcast, Evernote, WriterDuet, Doodle, Google Hangouts On Air, Overcast
Social Bookmarking	Twitter, Pinterest, StumbleUpon, Dribble, Pocket, Digg, Reddit, Slashdot
Social Networking	Facebook, Instagram, MySpace, YouTube, Classmates, LinkedIn, DeviantArt, Qzone
Subscribed content delivery	Google Reader, Bloglines, RSS Feeds, Taboola, OneLoad, OneBrain
Blogs and microblogs	Blogger, Posterous, Dailybooth, Somo, Canva, Twitter, Tumblr, Pownce, MySay
Wiki	WikiBooks, WikiMapia, WikiHow, WikiTravel, WikiCars, LyricWiki, Wikipedia
Virtual Worlds	Second Life, Active Worlds, Minecraft, Job Simulator, ourWorld, Twinity, Club Penguin
Management and administration tools	Turnitin, Plagiarism Checker, Gradebook, Moodle, Sakai, Blackboard

Learning platforms

A learning platform is a set of interactive online services that provide learners with access to information, tools, and resources to support educational delivery and management through the Internet. There are a variety of learning platforms with different levels of complexity, but their most important features include:

- learning content management – creation, storage, access to resources
- curriculum mapping and planning – lesson planning, personalized learning experience, assessment
- learner engagement and management – learner information, progress tracking
- tools and services – forums, messaging system, blogs, group discussions

Learning platforms are usually referred to as virtual learning environments (VLEs), learning management systems (LMSs), or learning content management systems (LCMSs). These terms are often used interchangeably, and despite differences between these platforms, they have many features in common (Ghirardini, 2011).

A Virtual Learning Environment (VLE) is a system for delivering learning materials to students via the web. These systems include assessment, student tracking, collaboration, and communication tools. They can be accessed both on and off-faculty, meaning that they can support students' learning outside the lecture hall 24 hours a day, seven days a week. This enables institutions to teach not only traditional full-time students but also those who cannot regularly visit the institution due to geographic or time restrictions, e.g., those on distance learning courses, doing evening classes, or workers studying part-time (Online Resource Centres, 2016). Virtual learning environments, or VLEs, are used to simulate traditional face-to-face classroom activities and facilitate teaching and learning with a strong collaborative component. Examples of VLEs are Moodle and Blackboard (Ghirardini, 2011).

LMS stands for Learning Management System, and it's a global term for a computer system developed explicitly for managing online courses, distributing course materials, and allowing collaboration between students and teachers. An LMS will allow you to manage every aspect of a course, from the registration of students to the storing of test results, as well as allowing you to accept assignments digitally and keep in touch with your students. In essence, the LMS is the backbone of most e-learning activities (Craig, Coldwell-Neilson, Goold, & Beekhuyzen, 2012).

Another type of platform – learning content management systems, or LCMSs – focuses mainly on creating e-learning content. In other words, developers and administrators create content material, such as articles, tests, games, video, and small units of digital content (content chunks), which then are rapidly assembled, reused, and tailored into different courses according to learners' needs. LCMSs

reduce development efforts and allow digital content to be easily repurposed. Both LMSs and LCMSs are designed to manage course content and track learner performance and learning objects, but they differ in their purposes. While LMSs manage and track online activities, classrooms and all sources and events, LCMSs do not manage blended learning, but only the digital content, even at its lowest levels (Ghirardini, 2011).

LMSs are built on various platforms, commonly PHP, .Net, or Java, and they will hook up to a database such as PostgreSQL, MySQL, or SQL Server. There are many LMSs out there, both commercial and open source. In a corporate environment, such a system can be used to monitor staff and keep records of appraisals and training. Whether a course runs for a few learners over a long time, or for many over a shorter period, a Learning Management System helps a course run smoothly. A good LMS will also have a reporting system so you can access information that would be tricky to gather yourself. Most LMSs offer customization options for the interface to allow the user to give a unique flavor to his learning platform. Although the GUI (Graphical User Interface) is there to make the environment more aesthetically pleasing, it's also meant to be functional. Aside from the GUI, an LMS will often offer several different options for customization to tailor the system to an individual's needs. Language options, notification settings, and other essential features can be changed to suit the way an LMS works. This is great because one LMS can be used by many different types of users, each with unique preferences.

The system may allow students to enroll online and keep track of their details, course progress, and test results. It may also enable students to pay their course fees online via credit card, debit card, or PayPal. LMS may integrate with whiteboard systems for virtual classroom sessions and help to schedule sessions too. It may offer the ability to send out invites or reminders for classroom sessions and integrate with an online calendar system or with Outlook. An LMS may be able to integrate with social media so one can share content or news items via Twitter or Facebook etc. at the click of a button. It should also have built-in functionality for communicating with students, such as sending out a bulk email to everyone on a particular course, to individual students, or students studying a specific pathway. Scheduling automatic emails can be very useful for notifying students of an upcoming test or virtual classroom session. An LMS may provide a chat room or a forum that a teacher and the students can use. With LMS, a teacher should also be able to specify the details of a course with a flexible workflow to set students on specific 'learning pathways'.

Any good LMS will have a reporting system, generating reports that can be exported into Excel, and also a graphical representation of data for ease of understanding. Being user-friendly is more than just a phrase. It's an action. When entering into an LMS for the first time, it's good to have at least a sample of a course to get you going. An example of how to upload, manage, and

distribute content within the system can go a long way with a new user. Templates are also good at getting new users going.
Tests are an important part of many online courses, and most LMSs will have plenty of functionality related to this. With the test environment being within an LMS, a teacher should also be able to rely on the security of the system. Test results will be stored and available within the reporting area of an LMS (Epignosis LLC, 2014).

Essential components of Learning Management Systems (Ismail, 2017):

- E-learning Standard Compliance: The ability to exchange data with other e-learning software through compliance with e-learning standards such as SCORM and Tin-Can.
- Multichannel Access: Learners can access their account and their course material through desktop, tablet, and smartphone devices.
- Course Management, Creation, or Importing: Administrators can either build courses using a built-in course builder or import course material from other formats.
- Document Management: The ability to upload and manage documents containing curricular content.
- Course Calendars: Features that support the creation and publication of course schedules, deadlines, and tests.
- Social Features: Notifications, messaging, and discussion forums to promote knowledge sharing and engagement.
- Tracking and Reporting: Detailed reports should be available so that both administrators and learners may view average test scores, final test scores, single-user reports, company, and so forth.
- Assessment and Certification: Pre-course assessments (or diagnostic assessments) to assess employee or student knowledge levels to assign suitable content to them. Digital or physical certification should also be supported.

Depending on deployment, there are three different types of Learning Management Systems (FinancesOnline, 2019a):

- On-Premise Learning Management Systems. Most of the time, learning management systems are sold to customers on the premise, meaning that they are enterprise products hosted on the company's server. They are traditionally more expensive, but their price can be justified by the fact that they offer more customization and individualization than any other type, and they tackle scalability issues. Most of them can be integrated with other locally hosted products.
- SaaS Learning Management Systems. SaaS or Software-as-a-Service systems are those hosted on the vendor's server for you to access from any location. They are known for being very flexible, and that's because the vendor is in charge of upgrading them and providing IT support, while the user doesn't need to care about scalability. Scaling them up and down

is easy even without experience, and they are considerably less expensive than the on-premise ones.

- Cloud-Hosted Learning Management Systems. Cloud-hosted LMSs are probably the most popular option among companies looking for streamlined and cost-effective training. They are hosted on the Internet and accessed by logging on the vendors' site, which is precisely where all communication and training is taking place. Due to the fact that there are no implementation and maintenance costs, they rank as the least expensive solutions for online training.

Bellow, some best-known learning platforms are listed.

Blackboard is adaptive to both business and the academe offering instructors and learners a reliable virtual ecosystem. The cloud UI provides course management with configurable settings and scalable features that match your current needs. It suits the requirements of small businesses and enterprises. The LMS is accessible from desktop and mobile devices and features a collaborative space that keeps learners connected to their courses and instructors at any time they're logged in the system. On the other hand, instructors can institute various methods to increase learning engagement and motive course completion (FinancesOnline, 2019b).
Moodle is a learning platform designed to provide educators, administrators, and learners with a single robust, secure, and integrated system to create personalized learning environments. Moodle provides the most flexible tool-set to support both blended learning and 100% online courses. Configure Moodle by enabling or disabling core features, and easily integrate everything needed for a course using its complete range of built-in features, including external collaborative tools such as forums, wikis, chats, and blogs (Moodle, 2018).
Docebo is a Learning Management System (LMS) that helps you organize, track, and distribute online courses for formal learning, be it for employees, clients, or customers. Instead of simply offering a one-way broadcast in its teaching solutions, Docebo encourages collaboration by allowing employees to ask questions and get answers from the relevant subject matter experts in their organization. Learners also able to share their knowledge, which can be validated through peer-review and shared across teams (Dalton & Turner, 2019).
LearnUpon aims to help educators engage their learners by optimizing the e-learning experience through interactive courses that can be designed to have quizzes, surveys, polls, and even timed questions. LearnUpon also allows users to divide each class into groups so you can allocate different catalogs and assignments depending on the criteria you prefer. Moreover, this tool has built-in dashboards that allow educators to see the progress of their students over time (FinancesOnlineb, 2019).
eFront Three versions: Community (basic), Educational, Enterprise. Visually attractive and highly expandable with various modules. Educational and

enterprise extensions are enriched with more powerful administration, performance management, and reporting features.

Dokeos Contains all features necessary for e-learning and blended learning. Available as: Free, Education, Pro, and Medical editions. Dokeos E-learning Studio offers free resources, templates for rapid content authoring, and a test builder, image gallery. Live collaboration through video conferencing tracks learner progress, time, and collaborative interaction. Language tool (DLTT) provides a workable language management tool.

Claroline More for educational than corporate environments, this system allows teachers to build online courses and to manage learning and collaborative activities on the Web. Translated into 35 languages, it has large worldwide users' and developers' community (Ghirardini, 2011).

OpenOLAT is a web-based e-learning platform for teaching, learning, assessment, and communication, an LMS, a learning management system. OpenOLAT impresses with its intuitive and straightforward operation. A sophisticated modular toolkit provides course authors with a wide range of didactic possibilities. Each OpenOLAT installation can be individually extended, adapted to organizational needs, and integrated into existing IT infrastructures. The architecture is designed for minimal resource consumption, scalability, and security to guarantee high system reliability (OpenOLAT, 2019).

ATutor The "A" stands for Accessible, and it has excellent support for essential accessibility standards (Atutor, Acontent, ATutor social). ATutor social is a social networking module that allows ATutor users to connect. They can gather contacts, create a public profile, track network activity, create and join groups, and customize the environment with any of the thousands of OpenSocial gadgets available all over the Web. ATutor Social can be used as a stand-alone social networking application.

ILIAS Provides testing and assessment tools as well as collaboration tools (e.g., chat and forums) and distribution technologies (e.g., RSS and podcasts). Learners can personalize their desktops and collect all resources needed to fulfill the daily learning tasks. The personal desktop features News, Personal Messages, Learning Resources, Personal Notes, Bookmarks, External Web Feeds, and other information. A learner can rearrange these blocks of information according to his or her needs. Content management and authoring are limited to XML modules, glossaries, and wikis.

Sakai CLE (Collaboration & Learning Environment) This is a robust system for education based on collaboration and open sharing of knowledge. It includes features of LMSs and VLEs and contains a full set of "core" capabilities (e.g., blogs, calendar, forums, glossary news, wiki, RSS reader). Users can easily create rich and collaborative documents and share them with others using integrated Google-powered tools (Docs and Google Apps). They are used by Yale, Stanford, Boston, Oxford, Berkeley, and Cambridge universities and more than 350 small private and public colleges and universities (Ghirardini, 2011).

.LRN is the world's most widely adopted enterprise-class open source software for supporting e-learning and digital communities. .LRN (pronounced "dot learn") is a global community of educators, designers, and software developers who

partner together to drive educational innovation. Because the software is open source, organizations can invest in people and curriculum development instead of expensive licensing and support fees (Learn Research Network, 2019).

Conclusions

The development of new information technologies in the 21st century is expanding the range of information resources. It is also creating conditions for the formation of a global informational, educational and cultural space, and therefore changes occur in the education system.
Online learning has blossomed over the past few years, with an increasing number of educational institutions offers distance learning courses via the internet. These days there is a growing number of qualifications, even degrees that you can learn online. It's not just academic training that has moved to the internet, but also a whole slew of business development programs that aim to teach and broaden employee skills (Dalton and Turner, 2019). E-learning has been proven to be a successful method of training and education.

E-learning is here to stay. As computer ownership grows across the globe, e-learning becomes increasingly viable and accessible. Internet connection speeds are increasing, and with that, opportunities for more multimedia training methods arise. With the immense improvement of mobile networks in the past few years and the increase in telecommuting, taking all the awesome features of e-learning on the road is a reality with smartphones and other portable devices (Epignosis LLC, 2014). The use of different technologies, such as social media, also contributes to transforming education.

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Engagement and burnout of secondary school students of the regular and sports departments

The aim of our study was to determine the statistically significant differences between the level of engagement, burnout and aspiration for the continuation of study, between students of the regular secondary school programs and students of the sports departments.
A paper-and-pencil survey was carried out in three secondary schools, which also have specific departments for athletes. A sample of 193 students of the third year, participated in this study, of whom 111 (57.5%) attended regular programs and 82 (42.5%) were included in sports departments of secondary schools in Slovenia. The “UWES-S” questionnaire of engagement and the “MBI-SS” questionnaire of burnout were used. The “aspiration” questionnaire consisted of 10 closed questions.
The results of our research showed that between student athletes and regular students there are no statistically significant differences in engagement. Although obviously there are mechanisms that eliminate the risks regarding the assumption that prolonged periods of exclusion from social and pedagogical developments in educational environment increases students risk of dropping out, also in terms of student athletes support in the educational system.

Introduction

The concept of engagement is a relatively old concept. A pioneer of this concept is William Kahn, who began his research in 1990. Among the researchers the concept continues to be very popular. At looking for keyword »engagement« in the Web of Science databases more than 3,800 articles can be found. Therefore, the engagement concept is not only useful for the study of engagement of employees in enterprises, but also for the student engagement studies.

In Slovenia, a large part of the population of young people is engaged in high-level sport. The number of categorized youth athletes in Slovenia, the country with 2 million inhabitants, is approximately 2,200. These are young perspective people, who often develop into elite athletes, and represent the country at the biggest competitions such as the Olympic Games and World Championships. In many cases they become role models. However, when combining their sports career with education or work, athletes often encounter difficulties, especially in the phase of transition from sports into a professional career. The reason for the problem is often inadequate education provided during the athletic career. Therefore, young people engaged in high-level sport need to receive some form of formal education already during their athletes' career. In order to systematically address this problem in EU Member States, the European Commission adopted the document *EU Guidelines on Dual Careers of Athletes* in November 2012. Stambulova, who researched the transitions in sport and education found that comparable with the 2007-2014 studies in the 2015-2018 papers and researches, the athlete samples show preference for elite junior or senior athletes over professional athletes, and for university level athletes over secondary education level students. A growing trend in recent research is a higher interest in studying athletes' significant others (coaches, teachers, parents, friends, support staff members) and their perspectives on dual career in terms of their support for education, and work (Stabulova & Wyllemann, 2018).

There were different approaches to the problem at the national levels in countries which were aware of the problem even before the adoption of the EU policies. One of the solutions to the problem are also the sports departments in secondary schools. For its approach as a sports secondary school it is well known the example of the *Schigymnasium Stams* in Austria which is in 2018 celebratied 50 years of existence. In Slovenia, the first "*Ski Gymnasium*" originated in 1976 in Škofja Loka. Today there are fifteen secondary schools which also have specific departments for athletes. These sports departments are attended by students, who train and compete at various sports and levels of competitions. During the school year student athletes have the possibility to be more frequently absent from the class and from assessments of knowledge. Even though their obligations, as well as the rest of the students, need to be carried out until the end of the school year. Aunola et al. (2018) researched the

dynamics of student-athletes' motivational patterns in relation to their future career aspirations on the 391 Finnish athletes, aged 15-16 in different sports. They identified three motivational patterns: a dual career -motivated (high value of both sport and school), a low academically motivated (high value of sport and low value of school), and a low sport motivated and predicted the dual career athletes' future aspirations (e.g., low academically oriented aspired for professional athletic career, and dual career-motivated aspired for university education).

In our study we assumed that student athletes are less engaged to study, due to their engagement in sport. We assumed that at the end of the school year student athletes are more burnt out and have less aspiration for the continuation of study and that they also have lower educational success. With our research we wanted to determine the differences between the students of the regular secondary school programs and the students of sports departments in educational success, engagement and burnout. The research question was focused on the level of engagement and burnout between students of the regular secondary school programs and students of the sports departments; and which are the differences between mentioned groups.

Theoretical background

Engagement

Work engagement of the employee is equivalent to his personal effort invested in work. The first to begin with the scientific research of engagement of employees is considered William Kahn. Kahn (1990) researched the relationship between employees and their work obligations, derived from the theories of organizational behaviour from the fifties and sixties of the last century. He studied the affection of interpersonal relationships, work interactions, group and intergroup dynamics and the organizational context to the personal perception of the importance of the work of employee.

On this basis, he formed the two hypotheses:

- The values and behaviours of the employee are affected by psychological experience at work.
- The psychological experience of employee is affected by: interpersonal relationships, work interactions, group and intergroup dynamics, the organizational context and the characteristic of the individual.

Two parallel studies in two completely different organizations were conducted: (1) in the summer work camp, where approximately 100 adolescents worked on a voluntary basis for six weeks as counsellors and (2) in the architectural firm, a permanent system, which was considered prestigious and where 45 people had been employed.

Kahn defined that personal engagement and disengagement at work are two distinct categories that should be considered completely separate.

Personal engagement is the simultaneous employment and expression of a person`s "preferred self" in task behaviours that promote connections to work and to others, personal presence (physical, cognitive, and emotional), and active, full role performances (Kahn, 1990). Kahn also discovered that there is a correlation between personal engagement and importance that the employee attaches to the following three factors:

- **Meaningfulness:** Sense of return on investments of self in role performances.
- **Safety:** Sense of being able to show and employ self without fear of negative consequences to self-image, status or career.
- **Availability:** Sense of possessing the physical, emotional and psychological resources necessary for investing self in role performances.

Personal disengagement, conversely, is the simultaneous withdrawal and defence of a person`s preferred self in behaviours that promote a lack of connections, physical, cognitive, and emotional absence, and passive, incomplete role performances (Kahn, 1990). Preferentially reflects hiding true identity.

On the basis of Kahn`s research, a number of other scientific researchers have been carried out in the following years. In Europe, this area has largely involved the University of Utrecht, especially *Wilmar B. Schaufeli*. To measure work engagement, a special model called the *Utrecht Work Engagement Scale* (UWES) was established. UWES questionnaire (Schaufeli, Bakker, 2003) consists of 17 questions relating to three constituting aspects of work engagement: **vigour** (assessed by 6 items), **dedication** (assessed by 5 items) and **absorption** (measured by 6 items).

Vigour refers to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties. **Dedication** refers to deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired and challenged by it. **Absorption** refers to being totally and happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly and one forgets everything else that is around.

The concept of work engagement is related to positive psychology. Work engagement is the hypothesized opposite of burnout. Vigour is the opposite of exhaustion. Dedication is the opposite of cynicism. Absorption is the opposite of reduced efficacy. Referring to Schaufeli (2003) this does not mean that there is a negative correlation between the concepts of engagement and burnout. That is, when an employee is not burned-out, this doesn't necessarily mean that he

or she is engaged in his or her work. Reversibly, when an employee is low on engagement, this does not mean that he or she is burned-out.

It is necessary to make a distinction between engagement and workplace satisfaction. Kruse (2012) says that the company can offer all kinds of bonuses to employees. This could mean that employees will be more satisfied, but not necessarily, that the satisfied employees will also be engaged.

The consulting agencies later developed a number of commercial scales for measuring employee engagement. One of the most frequently and globally used is »*The Gallup Q12 questionnaire*«. Gallup approach is based on the 12 questions that classify employee engagement in three categories: engaged, not engaged and actively disengaged. The approach to the classification of employees into categories by Gallup Q12 questionnaire is somewhat different, as William Kahn`s. Employees are categorized into three groups and not only in two. The third category of employees according to the Gallup Q12 questionnaire are the »actively disengaged«. These are the employees who actively express their dissatisfaction.

The exploration of work engagement is highly relevant field in the organizational sciences at the moment. Aspects of the research are different. Barnes, Collier and Robinson (2014) have researched how customer contact level influence the relationship between customer emotions and work engagement, while simultaneously evaluating psychological capital as an outcome of work engagement. Customer service research highlights the impact of employee attitudes and behaviours on customer satisfaction. Banihani, Lewis and Syed (2013) have researched whether work engagement is gender-neutral, where women and men have equal opportunity to demonstrate their engagement in the workplace. It showed that work engagement is a gendered concept, as it is easier for men to demonstrate work engagement than for women. Engelbrecht, Heine and Mahembe (2017) have carried out a study on how leader integrity and ethical leadership can influence trust in the leader and employee work engagement. Haruna and Marthandan (2017) examined the impact of foundational competencies on work engagement. This research reveals that the foundational competencies have a significant positive effect on work engagement.

Alexander W. Astin (1989) was the first to mention the concept of student engagement. Since then, a number of discussions took place about the meaning of the term "student engagement". Exeter et al. (2010) said that student engagement means students' time, energy and resources spent on activities that are designed to develop knowledge. For measuring student engagement, a customized student version, based on the Utrecht Work Engagement Scale, has been developed by Schaufeli (2002). Compared to the employee version in the UWES-S some items have been rephrased. The questionnaire consists of 14 questions. Similar as in research of work engagement, numerous researches

have also been done in student engagement. Trends in the research of the student engagement were changing in the past decade. The current trends are related to the influence of the gamification in education (Urh, Jereb, 2017) and the use of modern technologies of educating on the student engagement. Gamification is use of the game-design elements in non-gaming contexts. The results of several studies suggest that the use of gamification in education improves student engagement. Ding, Kim, and Orey (2017) published a study on the impact of gamification, using the tools gEchoLu, on student engagement. The results indicated that gEchoLu had positive influences on student behavioural engagement, emotional engagement, and cognitive engagement. Miller, Zyto, Karger, Yoo, and Mazur (2016) found that gamification can affect student engagement, however, it also has to assist people meeting their psychological needs.

Burnout

Burnout is a mental and emotional exhaustion related to work. Burnout in the workplace or »burnout syndrome« has become the subject of scientific research in the seventies of the last century. The term »burnout« was first used to describe a syndrome of exhaustion observed among mental health professionals (Freudenberger, 1974). Burnout is a psychological condition, characterized by emotional exhaustion, depersonalization and a reduced sense of personal accomplishment.

Since burnout was first studied by psychologists, the first definitions are related to emotions. Yavuz & Dogan (2014) stated that burnout is the syndrome of emotional exhaustion and cynicism of the individual. A key aspect of the burnout syndrome is an increase in feelings of exhaustion. Another aspect is the development of negative, cynical attitudes and feelings. Burnout does not mean mere emotional exhaustion, but it also means physical exhaustion.

The items for the »*Maslach Burnout Inventory* (MBI) « questionnaire were designed to measure hypothesized aspects of the burnout syndrome (Maslach, 1981). The development of the MBI was based on the need for an instrument to assess experienced burnout in a wide range of human services professionals. Initially, it was believed that the burnout syndrome affected only professionals with extensive human interaction as social workers, nurses, doctors, psychologists and educators. Whereas, the MBI questionnaire could not be used in a number of other areas, Schaufeli et al. (1996) have developed a modified questionnaire »MBI-General Survey (MBI-GS) «, which is more generally defined and also can be used to study burnout outside the human services. The questionnaire measure **exhaustion**, **cynicism** and professional **efficiency**.

Exhaustion is measured by items that refer to fatigue but do not make direct reference to other people as the source of those feelings. **Cynicism** reflects indifference or a distant attitude toward work in general, not necessarily with

other people. **Professional** efficiency has a broader focus compared to the parallel original MBI scale, encompassing social and non-social aspects of occupational accomplishments.

MBI-GS questionnaire was used by a number of researchers. Schutte, Toppinen, Hardening and Schaufeli (2000) have carried out a study, which included data from the Finnish, Swedish and Dutch employees (total N = 9055). They assumed that the hypothesized three-factor model of the MBI-GS (exhaustion, cynicism, professional efficiency) is invariable across various occupational groups (managers, officers, manual workers). Internal coherence of the data and the theoretical model was satisfactory, except at the level of cynicism in some under samples. Authors explained these discrepancies as differences between nations and occupational groups.

Given the criticisms made regarding the MBI, new models for the measurement of burnout have been developed. Demerouti et al. (2001) proposed the job demands–resources (JD-R) model, assuming that working conditions can be categorized into job demands and job resources, reflecting exhaustion and disengagement. Results have confirmed the 2-factor structure, exhaustion and disengagement, of a new burnout instrument the »Oldenburg Burnout Inventory (OLBI)«, and suggested that this structure is essentially invariant across occupational groups. Kristensen et al. (2007) have developed »The Copenhagen Burnout Inventory (CBI) «. The CBI consists of three scales, which measure personal burnout, work-related burnout, and client-related burnout.

Despite the fact that from the establishment of the MBI more than 40 years has passed and that this model had many critics, it is still in use today. Poghosyana, Aikenb and Sloane (2009) performed international nursing research in hospitals in the United States, Canada, Germany, New Zealand, Japan, Russia and Armenia on the basis of the MBI questionnaire. The sample consisted of 54,738 direct care professional nurses from 646 hospitals. Factor analysis of nurse surveys from 8 countries demonstrated a similar factorial structure across countries with differently organized and financed health systems and different languages. It has to be pointed out that this research was limited to a nurse job-related burnout.

Schaufeli et al. (2002) adopted the Maslach Burnout Inventory (MBI) questionnaire also for university students. This study examined burnout in university students from Spain (n = 623), Portugal (n = 727), and the Netherlands (n = 311). Analyses showed that the expected three dimensions of burnout: exhaustion, cynicism, and reduced efficacy were confirmed in student engagement. The adapted version is called the *Maslach burnout inventory – student survey* (MBI-SS). Hu and Schaufeli (2009) later confirmed the hypothesized three-factor model also in China. The "MBI-SS" questionnaire has a number of criticisms. Schwarzer, Schmitz and Tang (2000) have carried out a comparative study in Germany and China, and compared the results with the

results from the USA. Authors confirmed differences between the three states. Critics also found that the factor analysis in some other researches is often not consistent with the theoretical "MBI-SS" model. Alvarez Duarte Bonini Campos et al. (2012) have carried out a survey among students in Portugal and in Brazil. They found that the student burnout in Portugal and Brazil is best defined by two dimensions, described as the physical and cognitive exhaustion and cynicism, and not the three dimensions. Similar observations were also identified by authors Maroco and Campos (2012) and Yavuz and Dogan (2014).

The influence of parents was obviously not the subject of our research and was not included in our survey. However, there are a number of studies (e.g. McNeal (1999), the Jereb et al. (2009), Blondal and Adalbjarnardottir (2014), etc.), attesting to the influence of parents on the educational achievement of children. Research confirms that children of parents from the higher social classes reach better educational achievements, because the parents from higher social classes have different values. Blondal and Adalbjarnardottir (2014) have found that even slightly more "challenged" approaches with adolescents between the ages of 14 to 22 years of age lead to better educational achievements.

Research question and hypotheses

The research question of our study was focused on the level of engagement between students of the regular secondary school programs and students of the sports departments; and which are the statistically significant differences between the students in regular and sports departments in educational success, engagement to study, burnout and educational aspirations.

From this perspective we pointed out the following hypothesis: H1: There are statistically significant differences between student athletes and students who do not have the status of an athlete in educational success. H2: There are statistically significant differences between student athletes and students who do not have the status of an athlete in engagement to study. H3: There are statistically significant differences between student athletes and students who do not have the status of an athlete in burnout. H4: There are statistically significant differences between student athletes and students who do not have the status of an athlete in educational aspirations.

Method

Sample

In Slovenia there are fifteen secondary school programs at the moment, which also have specific departments for athletes. The paper-and-pencil survey was done in three such secondary schools in Jesenice, Ljubljana and Radovljica. All students of the third year of study were interviewed. We assumed that in the third year of study aspirations for the continuation of the study occur. We interviewed 193 students. 83 (43.0%) were male, 89 (46.1%) female, 21 (10.9%) did not elaborate on gender. In the sample, there was 111 (57.5%) students

of the regular departments and 82 (42.5%) students included in sports departments. The age of the students in the third year of secondary school is 18 years.

Instrument

To investigate the **engagement** of regular students and student athletes, we used the "Utrecht Work Engagement Scale for students (UWES-S)" questionnaire (Schaufeli et al., 2002). As already described in the theoretical background there are number of different questionnaires of engagement. The referring questionnaire is the first to measure the engagement of students and is adopted to measure engagement in education. The questionnaire consists of 14 questions. Elements of the questionnaire refer to the following elements: Vigour (VI), Dedication (DE) and Absorption (AB). Vigour refers to high levels of energy and resilience, the willingness to invest effort, not being easily fatigued, and persistence in the face of difficulties. In terms of exploring students' engagement, it consists of 5 statements. Dedication refers to deriving a sense of significance from one's work, feeling enthusiastic and proud about one's job, and feeling inspired and challenged by it. In terms of education it also consists of 5 statements. Absorption refers to being totally and happily immersed in one's work and having difficulties detaching oneself from it so that time passes quickly and one forgets everything else that is around. In terms of measuring students' engagement, it consists of 4 statements.

For the research in **burnout**, we used the "Maslach burnout inventory – student survey questionnaire (MBI-SS)" (Schaufeli et al., 2002). The concept of the "MBI-SS" questionnaire consists of the following elements: Exhaustion (EX), Cynicism (CY) and Professional Efficiency (EF). In terms of measuring students' engagement, the questionnaire consists of 15 elements. Exhaustion is measured by items that refer to fatigue but do not make direct reference to other people as the source of those feelings. In terms of student burnout, it consists of 5 statements. Cynicism reflects indifference or a distant attitude toward work in general, not necessarily with other people. In terms of student burnout, it consists of 4 statements. Professional efficiency has a broader focus compared to the parallel original MBI scale, encompassing social and non-social aspects of occupational accomplishments. In terms of student burnout research it consists of 6 statements.

Aspiration, in the context of the research, means striving for a continuation of the study after graduating from secondary school. In the formulation of the questions on the level of aspiration we have derived from the fact that these are students of the third (the penultimate) year of secondary school. The decision on the continuation of schooling is similar to an important decision on a single purchase, such as a very expensive goods (e.g. housing). The decision-making process takes a long period of time and is hierarchically structured. Consequently, we proceeded from the AIDA Model, which has its origins in the concept of marketing. The AIDA model therefore represents a hierarchical model

of the decision-making process: *Awareness – Interest – Desire – Action* (Priyanka, 2013). Our original questionnaire was developed for the purpose of our study. The aspirations after the continuation of the study were measured in the questionnaire for students and student athletes, and are reflected in the elements of measurement of aspiration: Awareness (with 2 statements regarding awareness and importance of the place of study), Interest (in the university curriculum, the classes and professors of individual faculties and a reputation of universities and faculties). Desire, to enrol at the chosen faculty. And Action (to endeavour to fulfil enrolment requirements at the chosen faculty).

In the “UWES-S” questionnaire of engagement and the “MBI-SS” questionnaire of burnout the seven point Likert scale was used; where 0 is equal to never, 1 means a few times a year or less, 2 means once a month or less, 3 a few times a month, 4 once a week, 5 a few times a week and 6 equals every day. In the “Aspirations” questionnaire, the five point Likert scale was used; wherein 1 means »absolutely disagree« and 5 means »I absolutely agree«. Educational success was studied in the way to put a question to students and student athletes before the end of the school year. The question was: what kind of educational success you expect at the end of the third year of secondary school. We suggested answers in terms of normative established in education in Slovenia, where 1 means unsatisfactory grade, 2 minimum passing grade, 3 (good) average, 4 (very good) average and 5 excellent grade.

Description of the research

The survey was done in June 2017, one week before the end of the school year. We decided for the month of June because we assumed that obligations of the students are in this period very extensive, because the frequency of assessments of knowledge is greatest. Many students time effort to obtain good grades, to improve bad grades from the past, etc. During the school year, student athletes are more frequently absent from the class and from assessments of knowledge due to their sports schedules. Their obligations, as well as the rest of the students, need to be carried out until the end of the school year. A survey of the "paper-pencil" type was done in individual classes. The survey results were manually entered into the SPSS file. We calculated the Descriptive statistics. Further on, we carried out a t-Test for Equality of Means for the sample of students of the regular departments and student athletes in sport departments. Afterwards, the Factor analysis of the components Engagement and Burnout, and Regression analysis were also performed.

Results

When asked about the expected educational success at the end of the school year, a total of 175 students surveyed replied, of which 77 (44%) were student athletes and 98 (56%) regular students. Frequency responses of educational success and the mean of success according to department are displayed in Table 1.

Table 1. Frequency responses of educational success according to department

Department/Educational success	N	1	2	3	4	5	Mean	SD
Regular	98	0	7	44	31	16	3.57	.849
Sports	77	2	6	28	28	13	3.57	.952
Sum	175	2	13	72	59	29	3.57	.893

Among student athletes higher proportion of those who will be excellent (16.9%) or with very good grade (36.4%) has been noticed than among regular students (16.3% with excellent grade and 31.6% very good average grade). Among student athletes there were also two students, who failed to progress to a higher year of study. The results of the t-Test for equality of means, however, showed that between the student athletes and regular students, there are no statistically significant differences in educational success (Table 2).

Table 2. T-test for equality of means according to educational success of the department

t-Test for Equality of Means					
The educational success at the end of the school year	**t**	**df**	**Sig. (2-sample)**	**Difference**	**SD**
	.000	173	1.000	.000	.136

We can conclude that between students' athletes and students who do not have the status of an athlete, there are no statistically significant differences in educational success.

The mean values and standard deviations of the answers to the questions about engagement are shown in Table 3.

Table 3. The mean values and standard deviations of the answers to the questions about engagement

Engagement	**Regular Department**			**Sports Department**		
Q: VI, DE, AB	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
***Vigour* (VI)**: When I am studying:						
I feel mentally strong. (A1)	110	2.53	1.775	81	2.57	1.499
I can continue for a very long time. (A2)	111	2.37	1.778	82	2.46	1.650
I am bursting with energy. (A3)	111	1.72	1.568	81	1.77	1.527
I feel strong and vigorous. (A4)	110	2.15	1.698	82	1.94	1.542
When I get up in the morning, I feel like going to class. (A5)	110	1.67	1.782	81	1.38	1.384
***Dedication* (DE)**						
I find my studies to be full of meaning and purpose. (A6)	110	3.85	1.744	82	3.50	1.814
My studies inspire me. (A7)	111	2.13	1.630	81	1.65	1.493
I am enthusiastic about my studies. (A8)	111	2.26	1.772	81	1.86	1.473
I am proud of my studies. (A9)	111	3.15	1.728	82	2.74	1.865
I find my studies challenging. (A10)	111	3.35	1.756	82	2.73	1.633
***Absorption* (AB)**						
Time flies when I'm studying. (A11)	111	2.43	2.139	82	2.33	1.846
I forget everything else around me. (A12)	109	2.11	1.797	81	1.98	1.533
I feel happy when I am studying intensively. (A13)	110	1.56	1.732	82	1.20	1.290
I can get carried away by my studies. (A14)	110	1.69	1.733	82	1.71	1.567

Next, the factor analysis was performed. The value of the Cronbach's Alpha coefficient for the variables from A1 to A14 was 0.925. On the basis of factor analysis, we got three new factors that are consistent with the theoretical assumptions of the engagement. These factors were named: mental strength and energy, dedication and absorption. Factor analysis of the components of the engagement is shown in Table 4.

Table 4. Factor analysis of the components of the engagement

	The non-standardized coefficients		The standardized coefficients		
	B	**Std. err**	**Beta**	**t**	**Sig.**
Constant	3.615	.068		53.203	.000
Factor 1: Mental strength and energy	.145	.062	.176	2.326	.021
Factor 2: Dedication	.183	.075	.187	2.444	.016
Factor 3: Absorption	.150	.073	.155	2.048	.042

a. Dependent variable: educational success at the end of the school year

All three factors are statistically significant. With the regression analysis (see Table 5) we found out that with this three new factors relating to engagement, the 9.2% variance of the variable »Expected educational success at the end of the school year«, can be explained.

Table 5. Regression analysis – engagement

Model	R	R square	Adj. R square	Std. error
1	.330	.109	.092	.858

In order to determine if there are differences between the students in sports departments and regular departments, a t-test for the equality of means was done. The t-test revealed statistically significant differences only in the statements:

- “My studies inspire me.” (t = 2.052; p = 0.042) and
- “I find my studies challenging.” (t = 2.495; p = 0.013).

Table 6. Means and standard deviation for the statements A7 and A10

	Department	N	Mean	Std. dev.	Std. error
My studies inspire me. (A7)	Regular	111	2.13	1.630	.155
	Sports	81	1.65	1.493	.166
I find my studies challenging. (A10)	Regular	111	3.35	1.756	.167
	Sports	82	2.73	1.633	.180

Both of these statements refer to dedication, which is one of the dimensions of engagement. Student athletes are therefore in both cases less engaged (Table 6). Student athletes are less inspired and challenged by the studies than regular students.

Analysis between the student athletes and regular students in differences in engagement (as a whole) is shown in Table 7, where means and standard deviation of the variable "engagement" in a particular department is evident.

Table 7. Means and standard deviation of the variable "engagement"

	Department	N	Mean	Std. deviation	Std. error
Engagement	Regular	111	2.33	1.224	.116
	Sports	82	2.12	1.135	.125

The t-test for equality of means (t = 1.190; p = 0.235) showed no statistically significant differences for the variable "engagement" between the two departments. Therefore, we can conclude that between student athletes and regular students there are no statistically significant differences in engagement as a whole.

Next, the analysis of the results of burnout has been performed. The value of the Cronbach's Alpha coefficient for the variables from A15 to A29 was 0.764.

Table 8. Means and standard deviations of answers to the questions about burnout

Burnout	**Regular Department**			**Sports Department**		
Q: EX, CY, EF	**N**	**Mean**	**SD**	**N**	**Mean**	**SD**
***Exhaustion* (EX)**: I feel:						
Emotionally drained by my studies. (A15)	111	3.70	1.975	81	3.59	2.042
Used up at the end of a day at high-school (university). (A16)	110	4.48	1.635	82	4.27	1.743
Tired when I get up in the morning and I have to face another day at the high-school (university). (A17)	110	4.16	1.645	81	3.86	1.737
Studying or attending a class is really a strain for me. (A18)	111	3.44	1.688	82	3.74	1.647
Burned out from my studies. (A19)	111	3.30	1.822	81	3.43	1.843
***Cynicism* (CY)**: I have become:						
Less interested in my studies since my enrolment at the university. (A20)	105	2.47	1.937	82	2.85	1.906
Less enthusiastic about my studies. (A21)	110	3.06	1.854	82	3.13	1.783
More cynical about the potential usefulness of my studies. (A22)	111	2.50	1.873	80	2.49	1.828
I doubt the significance of my studies. (A23)	111	2.44	1.901	82	2.33	1.757
***Professional Efficacy* (EF)**						
I can effectively solve the problems that arise in my studies. (A24)	109	3.10	1.563	80	3.11	1.607
I believe that I make an effective contribution to the classes that I attend. (A25)	108	2.43	1.773	80	2.70	1.602
In my opinion, I am a good student. (A26)	110	3.46	1.764	81	3.53	1.747
I feel stimulated when I achieve my study goals. (A27)	110	3.50	1.841	81	3.60	1.708
I have learned many interesting things during the course of my studies. (A28)	111	3.32	1.602	81	3.44	1.573
During class I feel confident that I am effective in getting things done. (A29)	110	3.48	1.796	82	3.46	1.708

Factor analysis of the components of burnout has shown the existence of three new factors, but it was not consistent with the theoretical "MBI-SS" model.

With the t-test for equality of means we tested if there are differences between the student athletes and regular students in burnout. Means and standard deviations of the variable "burnout" for each department is shown in Table 9.

Table 9. Means and standard deviation of the variable "burnout"

	Department	**N**	**Mean**	**Std. deviation**	**Std. error**
Burnout	Regular	111	3.26	.895	.085
	Sports	82	3.31	.804	.089

The t-test of equality of means (t = -.366; p = 0.715) showed no statistically significant differences for the variable "burnout" between the two departments. Therefore, we can conclude that between student athletes and regular students there are no statistically significant differences in burnout (Table 9).

The results of the answers to the questions about aspiration for the continuation of the study are shown in Table 10.

Table 10. The mean values and standard deviations of the answers to the questions about educational aspirations

Aspiration	**Department**	**N**	**Mean**	**SD**
Awareness: I am aware that the:				
Next calendar year is the year of enrolment at the university. (C01)	Regular	95	3.33	1.607
	Sports	79	4.08	.984
Place of study is actually important. (C02)	Regular	96	3.56	1.221
	Sports	78	3.91	.871
Interest: I am interested in:				
The university curriculum. (C03)	Regular	96	3.79	1.178
	Sports	78	3.92	.990
The classes and professors of individual faculties. (C04)	Regular	96	2.82	1.066
	Sports	77	2.57	.938
A reputation of universities and faculties. (C05)	Regular	94	3.14	1.132
	Sports	79	3.06	1.030
Desire: I desire to:				
Enrol at the faculty I have already chosen. (C06)	Regular	94	3.49	1.326
	Sports	78	3.94	1.097
Action: I am endeavour to:				
Fulfil enrolment requirements at the chosen faculty. (C07)	Regular	96	3.72	1.158
	Sports	78	4.24	.914
Aspiration for the continuation of study (aspiration as whole)	Regular	96	3.40	.913
	Sports	79	3.68	.669

Next, we tested if there are differences between the student athletes and regular students in educational aspirations (for individual statement and aspiration as whole). The t-test for equality of means was used. The results are shown in Table 11.

Table 11. T-test for equality of means of aspiration for the continuation of the study

Aspiration	t	df	Sig (2 tailed)
I am aware that the next calendar year is the year of enrolment at the university. (C01)	-3.618	172	.000
I am aware that the place of study is actually important. (C02)	-2.116	172	.036
I am interested in the university curriculum. (C03)	-.785	172	.433
I am interested in the classes and professors of individual faculties. (C04)	1.626	171	.106
I am interested in a reputation of universities and faculties. (C05)	.452	171	.652
I desire to enrol at the faculty I have already chosen.(C06)	-2.375	170	.019
I am endeavour to fulfil enrolment requirements at the chosen faculty. (C07)	-3.261	172	.001

The t-test for equality of means (t = -2.232; p = 0.027) showed statistically significant differences between student athletes and regular students in the aspiration for the continuation of study (aspiration as a whole). Student athletes are more aware that the next calendar year is the year of enrolment at university. They have greater interest for specific faculties and therefore endeavour to fulfil enrolment requirements at the chosen faculty.

Further on, regression analysis of the impact of aspiration for the continuation of study on educational success has been performed. We found out that the awareness, interest and desire for further education have no statistically significant impact on educational success. Although, “endeavour to fulfil enrolment requirements at the chosen faculty” has statistically significant impact on educational success though the impact is low (r = 0.168, p = 0.05).

For the conclusion of our research the correlation analysis between common variables »engagement«, »burnout« and »aspiration« and the variable »educational success« has been performed (Table 12).

Table 12. Correlation analysis between common variables »engagement« (ENG), »burnout« (BUR) and »aspiration« (ASP) and the variable »educational success«

	Educational success	ENG	BUR
ENG	.237**		
BUR	.085	.117	
ASP	.144	.351**	.202**

** Correlation is significant at the 0.01 level (2-tailed)

Correlation analysis showed a significant correlation between the engagement and educational success (r = 0.237, p = 0.01). Aspiration has no direct influence on educational success, although the educational success is impacted indirectly. Students who have higher levels of aspiration are more engaged (r = 0.351, p = 0.01). Even so, students who have expressed more aspiration after the continuation of study are more burned out (r = 0.202, p = 0.01).

Discussion

In **the hypothesis 1** we assumed that there are statistically significant differences between student athletes and students who do not have the status of an athlete in educational success. We did not confirm the hypothesis.
Between student athletes and students who do not have the status of an athlete, there are no statistically significant differences in educational success. The finding that between student athletes and regular students there are no differences in educational success is astounding and contra to our expectations. Valeeva et al. (2017) have confirmed the assumption that prolonged periods of exclusion from social and pedagogical developments in an educational environment increases students risk of dropping out. Student athletes are several months per study year away from their educational environment. Our findings may indicate that in the educational system, obviously there are mechanisms that eliminate the risks regarding the assumption that prolonged periods of exclusion from social and pedagogical developments in educational environment increases students risk of dropping out

In the **hypothesis 2** we assumed that there are statistically significant differences between student athletes and students who do not have the status of an athlete in engagement to study.

We did not confirm the hypothesis. The results of our research showed that between student athletes and regular students there are no statistically significant differences in engagement (see table 10). The results of the factor analysis of the components of the engagement were consistent with the theoretical assumptions of the engagement.

From the results of our research (see table 6), it is evident that the level of engagement of students in general is relatively low. On a seven point Likert scale (from 0 to 6) of the questionnaire about engagement, the lowest mean value was for the statement A3 »When I study, I feel like I am bursting with energy« (1.77 for student athletes and 1.72 for regular students). Results of the survey also showed the lack of mental strength and energy of the students at the end of the school year. (The survey was done at the end of the school year.). This suggests that students are missing engagement at the end of the school year, regardless the department they are included. Further on assume that such results are affected by student exhaustion at the end of the school year. The highest value of the arithmetic mean was found for the statement A6 »I find my studies to be full of meaning and purpose« (3.50 for student athletes and 3.85 for regular students). We found that students, however, believe that their education has a meaning and a purpose.

Among the interviewed students we've seen very substantial differences, which can be seen from the high values of the standard deviations (see table 6). However, these differences are not related to engagement of students in sports. Over all, we can conclude that between student athletes and regular students there are no statistically significant differences in engagement (see table 10). Following the assumptions regarding student exhaustion at the end of the school year, we also assume that the source of student engagement is in the fact that students perceive their education to be full of meaning and purpose. Results of the survey also showed the lack of mental strength and energy of the students at the end of the school year. Therefore, vigour has not been a source of student engagement.

The results of the factor analysis of the components of the engagement were consistent with the theoretical assumptions of the engagement. With regression analysis, with three new factors relating to engagement, the 9.2% variance of the variable »Expected educational success at the end of the school year«, could be explained.

In the **hypothesis 3** we assumed that there are statistically significant differences between student athletes and students who do not have the status of an athlete in burnout. We did not confirm the hypothesis. The research showed that between student athletes and regular students there are no statistically significant differences in burnout. With the factor analysis of the components of the burnout, in accordance to the "MBI-SS" model, we found that the results of our factor analysis do not follow the theoretical model.

The analysis of the answers to the questions about burnout revealed a high level of burnout or exhaustion. The arithmetic mean of responses about burnout for all students was 3.28 at a seven point Likert scale (from 0 to 6) of the questionnaire about burnout. The mean values have been higher, as in the case of the questionnaire about engagement. The highest value was for the

statement A16 »I feel used up at the end of a day at high-school« (4.27 for student athletes and 4.48 for regular students). Regarding burnout, we've seen very substantial differences between the student athletes and regular students. However, even these differences are not related to engagement of students in sports. We can conclude that between student athletes and regular students there are no statistically significant differences in burnout.

With the factor analysis of the components of burnout, in accordance to the "MBI-SS" model, we found that the results of our factor analysis do not follow the theoretical model. We were not surprised about this, since it is known that the "MBI-SS" questionnaire has a number of criticisms (Schwarzer, Schmitz & Tang, 2000; Campos et al., 2012; Maroco & Campos, 2012; Yavuz & Dogan, 2014). On the basis of our research, we think that consideration on how to separate the physical exhaustion from emotional exhaustion in the questionnaire is needed.

We found no correlation between burnout and engagement in our research. Schaufeli et al. (2008) claim that burnout, and work engagement - the supposed antipode of burnout - can be distinguished empirically. However, also this claim has a number of criticisms. Drawing on 50 unique samples (from 37 studies), Cole et al. (2012), assessed the extent to which job burnout and employee engagement are independent and useful constructs. The authors found that dimension-level correlations between burnout and engagement are high.

In the **hypothesis 4** we assumed that there are statistically significant differences between student athletes and students who do not have the status of an athlete in educational aspirations.
Regarding aspiration, the research indicates, that between student athletes and students who do not have the status of an athlete, there are statistically significant differences in aspiration for the continuation of the study.
Regarding aspiration, research shown that between student athletes and students who do not have the status of an athlete there are statistically significant differences in aspiration for the continuation of study. Student athletes are more aware that the next calendar year is the year of enrolment at university. The interpretation of this result could be a higher awareness of student athletes, than as of their peers. This could also suggest why the place of study is important to student athletes. We assume that this is related to their dual career opportunities; to continue with their studies and their sporting career. Student athletes also have greater interest for specific faculties and therefore endeavour to fulfil enrolment requirements at their chosen faculty. As a point of interest we present the finding that women have expressed more aspiration for continuation of study than men.

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Evaluations, evaluating, accreditation, and the importance of evaluator calibration

This paper discusses evaluations, evaluating and accreditation of educational institutions (schools) and educational programmes. It presents different definitions of the term “evaluation”. Common to all definitions of the term “evaluation” is that it refers to valuation. Accreditation is, however, an official certification that institution receives once the standards of quality have been met.
The aim of evaluation is to check whether an organisation respects the principles of the profession. The object of evaluation and the methods of evaluation can considerably vary. The paper focuses on practical evaluations. As the object of evaluations, we present the organisation itself and the entire curriculum. When evaluating an organisation, we focus on the aspects of (1) Collective Ambition, (2) Employee competences and engagement, and (3) Organisational model.
According to our understanding, a curriculum consists of: (1) educational goals, (2) content, (3) organisational forms and methods, (4) educational materials, (5) educational providers and (6) the implementation itself.
Accreditation is more than just an evaluation. Awarded accreditation has a function similar to a brand; like a brand, accreditation constitutes a “promise”. When evaluating mechanistically whether an organisation adheres to the principles of educational science, the essence of the philosophy of accreditation is the verification of transparency, efficiency, credibility, and integrity.
People-evaluators participate in the processes described. It is human nature that they may have different perceptions of the same thing. Therefore, evaluator calibration is very important.

What are evaluations

One of the first but still applicable definitions of the term “evaluation” in relation to education was provided by Ralph Tyler (1902-1994). Tyler (1949) states that evaluation is the process for determining to what extent the educational objectives are actually being realised. The point of evaluation is to find what needs to be improved and to improve it.

Dahler-Larsen (2012) opens his book with a statement that we live in the age of evaluation. In recent years, we have witnessed a boom in evaluation. Today, one can hardly enter a hospital, apply for a job, or seek information at city hall without having to evaluate or be evaluated. The evaluation wave has to do with mentality and culture in many areas of our daily lives. If the evaluation mentality were not already so widespread in our society, evaluations in a strictly organizational and administrative sense would not be so widespread, either.

Cambridge Dictionary defines “evaluation” as “the process of judging something's quality, importance, or value, or a report that includes this information”.

The matter is seemingly quite simple. But this is not really the case. There is no doubt that evaluation is observation and valuation, but the purpose of evaluation, what evaluation is, and how we observe it, is important. There are also different methods of observation and different perceptions of what is perceived. So the matter is not so simple, which is why there are different definitions. Definitions can reflect different aspects: for instance, they simply explain the essence of evaluation or the difference between evaluation and non-evaluation, but they can also clarify the concept of evaluation.

Hernon, Matthews and Dugan (2014) say: Simply stated, evaluation is the process of identifying and collecting data about specific services or activities, establishing criteria by which their success can be measured, and determining the quality of the service or activity—the degree to which it accomplishes stated goals and objectives.

Dahler-Larsen (2012) classifies definitions of evaluations into groups:

- a conceptual-analytical definition of evaluation
- a purpose-focused definition of evaluation
- a methods-focused definition of evaluation
- a combinatory approach to the definition of evaluation as a practice in a context

A conceptual-analytical definition of evaluation was given by Michael Scriven. Scriven (1991) states that evaluation refers to the process of determining the merit, worth, or value of something, or the product of that process. The evaluation process normally involves some identification of

relevant standards of merit, worth, or value; some investigation of the performance of the evaluations on these standards; and some integration or synthesis of the results to achieve an overall evaluation or set of associated evaluations.
The evaluation conducted according to Scriven's definition only analyses the object of evaluation and does not suggest any activity for change.

A **methods-focused definition** of evaluation **was provided by Rossi and Freeman**. Rossi and Freeman (1985) define evaluation research as the "systematic application of social research procedures in assessing the conceptualization and design, implementation, and utility of social intervention programs. Given this aspect of the definition, evaluation can gain legitimacy through its basis in scientific methodology.

Purpose focused evaluation is the systematic collection of information about the activities, characteristics, and outcomes to make judgments about the object of evaluation Dahler-Larsen (2012) states**,** that purpose-oriented definitions allow evaluation to take many forms. Depending on the specific purpose in a given situation, evaluation will unfold in a particular way. Evaluation has many faces, depending on circumstances. As a corollary, evaluation is likely to be contested, because stakeholders may hold their own views about how best to use evaluation.

Most integrative definitions of evaluation include four key factors with which any evaluation must deal: (1) an evaluand, (2) some assessment based on some criteria, (3) a systematic approach or methodology to collect information about how the evaluand performs on these criteria, and (4) a purpose or intended use.

In order to understand evaluations, it is also necessary to understand the principles by which evaluators must operate. Around the world, several principles are available to guide the evaluators' professional practice. As an example, we are focusing on the principles published by the American Evaluation Association. They have been periodically revised since their first adoption in 1994. The AEA's 2018 Updated Guiding Principles for evaluators represent the diversity of perceptions about the primary purpose of evaluation, as well as the diverse background of the evaluators. Therefore, the following are the guiding principles for evaluators

1. **Systematic Inquiry:** Evaluators conduct data-based inquiries that are thorough, methodical, and contextually relevant.
2. **Competence:** Evaluators provide skilled professional services to stakeholders.
3. **Integrity:** Evaluators behave with honesty and transparency in order to ensure the integrity of the evaluation**.**
4. **Respect for People:** Evaluators honor the dignity, well-being, and self-worth of individuals and acknowledge the influence of culture within and across groups.

5. **Common Good and Equity:** Evaluators strive to contribute to the common good and advancement of an equitable and just society.

Purpose and types of evaluations

As mentioned earlier, the main purpose of any evaluation is to find what needs to be improved and to improve it.

We can evaluate a programme that we have already prepared, but have not yet begun to implement. Or we can evaluate an ongoing programme. Whether we are evaluating a future programme, or a programme that is already in progress, we distinguish between:

- **formative evaluation** - is used for improving ongoing programs and services;
- **summative evaluation** (or reviewing completed programs and services).

We can carry out evaluations on our own, or find people from the environment to perform them. Depending on who operationally performs the evaluations, we differentiate between:

- internal evaluations, often referred to as self-evaluations. These are performed by participants (usually training providers or management);
- external evaluations carried out by external providers.

Hernon, Matthews, and Dugan (2014) classify the types of evaluations as:

- Program or service planning, which focuses on "What is the extent and distribution of the target population?" "**Does the program or service conform with its intended goals**?" "Are the chances of successful implementation maximized?"
- Program or service monitoring, which centers on: "**Is the program or service reaching the persons, households, or other target units to which it is addressed?"** "Is the program or service providing the resources and other benefits that were intended in the project design?"
- Impact assessment, which addresses: "Is the program or service effective in achieving its intended goals?" "Can the results of the program or service be explained by some alternative process that does not include the program?" "Does the program or service have unintended effects?"
- Economic efficiency, which covers: "What are the costs of delivering services and benefits to program participants?" "**Does the program represent an efficient use of resources** in comparison to alternative uses of the resources?"

There are different methods of evaluation. One or several methods can be applied in the implementation of evaluation. Depending on the method used, evaluations are categorised as:

- scientific evaluations, which we refer to as educational research;
- practical evaluations.

Scientific evaluations are carried out using scientific methods. Practical evaluations are primarily aimed at determining if the educational objectives have been achieved.

Evaluation scope

The evaluation scope is the area covered by the collaborative evaluation itself or the range of work to be accomplished. It provides clear information about what the evaluation will and will not focus on, depending on the boundaries set. The evaluation scope establishes the evaluation boundaries as the basis for a clear planning and responsibility assignment. In addition, it leads to the establishment of criteria used in the evaluation. (Rodríguez-Campos, Rincones-Gómez, 2012).

Evaluation scope can vary greatly. In principle, however, the object of evaluation always refers to:

- the organisation as such;
- the content of the processes that take place within the organisation, and the state of the conditions for implementing the processes.

When evaluating organisations, evaluation usually focuses on the interpersonal aspect, that is, how things work. In the process evaluation, however, we focus more on the content of the processes, and the technological and technical aspects of implementation.

Organisation as an object of evaluation

Each evaluation relates to an organisation. This means that evaluation addresses:

- a definite circle of people that can be distinguished from the rest of the environment;
- hierarchical relationships between these people and their internal rules of behaviour;
- the procedures and processes that these people perform and which form a whole or at least part of a whole, bearing in mind the way people conduct the processes, not the content of the processes themselves.

This section will not deal with organisational theories and organisational structures such as: hierarchical, matrix, team, etc. Each organisation is represented by more or less engaged and competent people. There are interpersonal and business relationships between them. Since an organisation is not a machine, every organisation has its own values, internal culture, and way of thinking.

Evaluation methods are very different, and evaluation can only focus on a very narrow aspect. An evaluator visiting an organisation cannot be isolated from the

people, at a conscious and unconscious level, he/she perceives everything that is related to the organisation. The evaluator perceives a multitude of “images”. In order to avoid chaos, the observation must be systematic, and the perception must be structured. The evaluator can direct observation at:

1. Collective Ambition
2. Employee competences and engagement
3. Organisational model

Collective ambition

During the crisis, Douglas Ready and Emily Truelove explored corporate behaviour from 2008 to 2011. They have spent the three years studying companies across industries that have defied conventional logic. Theye developed and administered a survey to 45 companies around the world; interviewed dozens of CEOs, senior executives, and midlevel managers; and conducted workshops to construct a model that captures how they’ve succeeded.

Based on this research, Ready and Truel (2011) describe collective ambition as:

- **Purpose:** Organization’s reason for being; the core mission of the enterprise.
- **Vision:** the position or status organiaztion aspires to achieve within a reasonable time frame.
- **Targets and milestones:** the metrics you use to assess progress toward ther vision.
- **Strategic and operational priorities:** the actions you do or do not take in pursuit of your vision.
- **Brand promise:** the commitments you make to stakeholders (customers, communities, investors, employees, regulators, and partners) concerning the experience the organiaztion will provide.
- **Core values:** the guiding principles that dictate what you stand for as an organization, in good times and bad.
- **Leader behaviors:** how leaders act on a daily basis as they seek to implement the organization’s vision and strategic priorities, strive to fulfill the brand promise, and live up to the values.

Employee satisfaction, competences and engagement

Evaluators are very prone to addressing employee and student satisfaction. These are two completely different matters with an entirely different background. In this section, we will only address employees.

Each organisation is in direct contact with the environment through its employees. People from the environment very quickly perceive the **competence** of the person they are dealing with. They soon determine if he/she:

- did what was agreed;
- has the knowledge and ability to get the job done;
- is familiar with working methods;

- was willing to cooperate;
- exhibited proper behaviour;
- etc.

It is a question of competences. **Competences** are those acquired knowledge, skills, habits and innate abilities of an individual that enable him/her to perform work in accordance with expectations. The expectations relate primarily to the achievement of the criterion of fulfilment, the quality requirements, the use of resources and time frames.

Employee **engagement** indicates the personal effort that he/she puts into the work. **A distinction must be drawn between engagement and satisfaction** in the workplace.

The concept of employee satisfaction comes from the organisational behaviour paradigm. This is a decades-old concept originating from the study of the behaviour of industrial workers between 1920 and 1930 in the USA. For decades, all through the 21st century, various surveys conducted in organisations examined employee satisfaction, because it is and has for decades been believed that satisfied employees are more productive. This concept is still applied in many places, but it is considered outdated.

According to Kruse (2012), a company can offer employees all possible bonuses. This may mean that employees will be more satisfied. But satisfied employees are not necessarily engaged.

The first to begin scientifically studying employee engagement was *William Kahn*. Kahn (1990) examined **the relationship between employees and their work roles.**

Personal engagement is the simultaneous response of a person, and primarily reflects the person him/herself. Personal commitment showcases a person's connection with the work role and with others related to it. People who are committed are characterised by energy, cognitive abilities, etc. These are reflected in the work effort. Kahn (1990)

Conversely, **personal disengagement** is defined as the simultaneous withdrawal of a person's self, an automatic defence reaction, and above all reflects **hiding of true identity.**

Based on this research, many other scientific studies were carried out in the following years. A special model called the *Utrecht Work Engagement Scale (UWES)* was developed to measure employee engagement.
Advisory agencies have developed a number of commercial scales to measure engagement. One of the most widely applied is the *Gallup Q12 questionnaire.*

Organisational models
Rodríguez-Campos and Rincones-Gómez (2012). According to them the situation is a combination of formal and informal circumstances determined by the relationships that surround and sustain the collaborative evaluation. This component is very important because the success of the evaluation will depend, to a large degree, on how well the situation is understood.

That is exactly what we will write about. We will deal with the questions of how they actually function, what mechanism drives them, whether things are static or dynamic, etc. In doing so, we assume that there is at least a minimum level of competences and engagement of employees.

Since our book addresses the education of athletes in educational institutions, we are ultimately interested in whether organisations are susceptible to adaptations to athletes, and why some schools adjust to athletes, while others do not.

Dahler-Larsen (2012) discusses organisational models, when addressing evaluations in organisations.

By an organisational model, he refers to a particular **way of thinking about organisations**.

Organizational models should not be confused with organizations or types of organization. Models of organization incorporate both analytical, normative, and sociohistorical ideas.

Organizational models both describe how organizations function and prescribe how they ought to function. In other words, organizational models are analytical and normative. They are analytical, like other scientific models or abstractions; they simplify reality. Through simplification, they emphasize certain specific conceptual features that help us understand life in and around organizations.
Dahler-Larsen (2012) lists three types of organisational models: Rational, Learning, and Institutionalised Organisation.

- **Rational organization** aims toward maximum predictability. Once a set of objectives have been determined, the best possible arrangements are made to achieve predictable realization of these objectives. (Dahler-Larsen, 2012).
- **Learning organization** presents itself as an alternative to the rational model. The learning organization wins out over other organizational forms because it is adaptable to the demands posed by a changing environment. It also wins out because it permits learning to occur in relation to decisions already taken. In the rational model, there exist only plans decided from above, plans that are then faithfully executed via set procedures. (Dahler-Larsen, 2012).

- **Institutional theory** emphasizes that cultural constructions such as rituals, myths, language, typologies, norms, habits, values, and routines become objectified, which is to say they appear for people as givens and in this sense become realities in themselves.

Naturally, we can agree with these definitions. However, we believe that the background of individual organisational models needs to be described in more detail. For example, when we refer to the institutionalised organisation as an organisational model, it should be considered that it derives from the concept of organisational culture. The purpose of introducing organisational culture, as well as its manifestations, has changed over time, and this is worth pointing out. The same applies to rational organisation.

We also believe that at least two types should be added to the definitions of organisational models, according to Dahler-Larsen:

- professional organisation;
- split organisation.

Rational organisation

The ways of thinking and functioning in a rational organisation are based on the principles of **bureaucratic organisation**. The founder of bureaucratic organisation is Maximilian ("Max") Weber (1854-1920). The principles of bureaucratic organisation were first published in 1905, and are: specialists do the work, there is hierarchy and authority, there is selection of employees, action is regulated by rules and powers, organisation is impersonal, etc.
Generally speaking, the term bureaucracy has a negative connotation and is often linked to government agencies and large organisations. Nevertheless, the great benefit of a bureacracy is that large organisations with many hierarchical layers can become structured and work effectively. On the other hand, bureaucracy is extremely dependent on regulatory and policy compliance. This restricts employees to come up with innovative ideas, making them feel like just a number instead of an individual. (Mulder, 2017).

Even in the context of athlete education, the bureaucratic organisation has its strengths and weaknesses. The schooling system itself is a bureaucratic organisation, since it is founded on programmes, curricula, rules, etc. This is good in its own way, as it prevents arbitrariness. On the other hand, the reference to rules often impedes adaptations that are required in the education of special needs groups, including athletes.

Professional organisation

The principles of professional organisation were founded by Henry Mintzberg. The essence of a professional organisation is that the operation is justified by a high degree of professionalism of those implementing duties (as opposed to the rule-based bureaucratic organisation). Employees of a professional

organisation are independent, unlike in a bureaucratic organisation, where hierarchy and authority dominate.

Learning organisation

The ways of thinking and functioning of a learning organisation are based on the principles of a learning organisation. Again, this concept is in some aspects the diametrical opposite of a bureaucratic organisation: if a bureaucratic organisation encounters a problem that is not described in the rules, it does not solve it; a learning organisation, however, seeks innovation. Bureaucratic organisation is based on hierarchy and authority, professional organisation is based on the professionalism of employees, and learning organisation is based on teamwork, shared visions, and common mental models.

Peter Senge is widely regarded as the founder of the concept of a learning organisation. Senge (1990) relies on the fact that the advancement of the world is not created by people who are constantly expanding their ability and creativity, who nurture and develop new ideas that are able to connect freely with like-minded people, and who are constantly learning how to learn with others. Learning organisations are, in his view, those in which people are constantly developing their capabilities to produce the results they really want, and where new, expansive thinking patterns are desirable and natural.
In his book, Senge (1990) describes that a learning organisation is based on five attributes:

- employee excellence and personal mastery of individuals;
- mental models;
- shared vision;
- team learning; and
- systematic problem solving and systemic thinking.

Since 1990, many other models of a learning organisation have been developed. The concepts of a learning organisation have contributed most to the development of some of the world's largest companies: Microsoft, Google, Samsung, and many more.

Institutionalised organisation

The ways of thinking and functioning in an institutionalised organisation are based on the phenomenon of **organisational culture**, or culture in general. Even if the thinking patterns of different organisations are based on organisational culture, these organisations may be completely different from one another. It should be noted:

1. Organisational culture, or culture in general, has several dimensions; it is practised in different ways, so addressing the substance of culture is extremely complex.
2. Understanding and practising culture has changed over time; therefore, it is important to know when and why a specific understanding was current.

3. The purpose of introducing culture has not always been humanism and raising the level of civilisation, but it could also be something else (e.g. increasing the productivity of industrial workers).

The social dimensions of organisation, and the psychology of work, gained the attention of the scientific sphere in years 1924 to 1933 when a series of well-known and comprehensively described experiments were carried out at the Western Electric plant in Hawthorne near Chicago to find out how physical working conditions (lighting) affect productivity. This research has had a tremendous impact. The **paradigm of "organisational behaviour"** was born, from which emerged many theories of individuals' motivation. The essence of the paradigm was that interpersonal relationships and working conditions improve workers' productivity. In this context, the first concepts of organisational culture were created. We believe it started with The Changing Culture of a Factory, written in 1951 by Elliott Jacques. Jacques (1951) cited the following attributes of organisational culture: fair and equitable treatment of all employees, fair pay, which also includes fair pay differentials based on the complexity of work, performance and merit, interactions between managers and subordinates, distribution of responsibilities and powers, trust, and vision of the organisation;

Since 1970, however, issues of product quality assurance and the related **culture of quality** have become more important than productivity. US companies have found that Japanese companies perform better because of their different culture (Ouchi & Wilkins, 1985; Morrill, 2008). A different culture at that time became a key competitive advantage of the Japanese economy. Japanese companies were very successful at that time in the US and Western European markets.

Tom Peters and Robert Waterman made a significant contribution to understanding organisational culture in 1982, when they wrote the then cult book *In Search of Excellence.* The authors write about what the most successful companies (at the time) do differently than others, while doing business in the same industry and using the same technology. It is therefore a question of what a company having the same productivity and quality as the competition, does differently to be more successful.

Today's conception of culture is based on research by Gerard Hendrik (Geert) Hofstede. Hofstede (2001) defined culture as the collective programming of the mind which distinguishes the members of one group or the category of people from another. Hofstede (2001) identifies five dimensions of culture: individualism/collectivism, power distance, uncertainty avoidance, masculinity and femininity, and long-term and short-term orientation. In 2010, researchers justified the sixth dimension of the Hofstede Insights (Hofstede Insights, 2017), namely indulgence versus self-restraint.
Power distance expresses the degree to which weaker members of society accept that power is unequally distributed in society.

Individualism or **collectivism** is reflected in the definition of human self-image in the sense of "I" or "we". Individualism is a social framework in which it is widely accepted and expected of individuals to take care only of themselves. The opposite is collectivism, in which it is widely accepted and expected that members of a group will take care of individuals in return for unquestionable loyalty.
Masculinity or **femininity** of society is a criterion for evaluating achievements. Masculinity in society means that achievements, heroism, and material rewards for success, are valued. The opposite is femininity, where collaboration, modesty, and quality of life are appreciated.
Uncertainty avoidance expresses the degree of perceived discomfort in unpredictable, unknown, or new circumstances. Cultures also differ in their attitude towards unusual behaviour and new ideas.
Future orientation is the relationship between the tendency to preserve tradition and change.
Tolerance or **restraint** means attitudes to enjoyment. A tolerant society, in addition to meeting basic living needs, also allows people to enjoy themselves and have fun. Conversely, a society can also inhibit enjoyment and fun by strict norms.

Split organisation
The concept of “split organisation” is based on the concept of the identity of the organisation. The identity of an organisation is all that the organisation is, and what can be the object of perception of people from the environment.
Throughout history, organisations have been formed because of the shared identity of the members. In this way, tribes, nations, religious communities, and even states, were formed. The components of identity were, for example: language, ruler, religion, and possibly even hate towards another group. According to Sabaté (2015), identity in history may even have been a condition for biological continuity of a community.
The concept of organisational identity only began to emerge in theory after 1950. The identity of an organisation is all that an organisation really is, and what can be perceived in relation to the organisation. Balmer and Greyser (2013) say that when developing an organisation's identity, three questions must first be answered:

- **Central focus:** What are the essential features of the organisation?
- **Difference from others:** What features distinguish the organisation from other organisations?
- **Continuity:** In what way has the organisation been unique during its existence?

In organisations, identity can change completely over time. Balmer and Greyser (2013) quote groundbreaking events within the organisation itself as reasons for this. Identity A gives rise to identity B. Something in between may also arise, namely AB. The case of *Samsung* is very often mentioned. *Samsung* was founded in 1938. The main activity of the company was the production and

export of food for the Chinese market. The company only began to deal with electronics in 1970.

In organisations, however, we can detect the phenomenon of "**identity duality**". This means that an organisation actually has two or even more identities. A typical example of the phenomenon of such an organisation was the former SFR Yugoslavia. This country even had multiple identities: two alphabets (Latin and Cyrillic), several official languages, and at least three large religious communities. Of course, there is nothing wrong with this until there is a struggle for supremacy, and until the members of the organisation start sending out contradictory messages. That is when we start talking about a split organisation.

Curriculum as an object of evaluation

All of us who are involved in the education system, sooner or later come across the word "curriculum". The word "curriculum" is of Latin origin and literally means "running". In the 16th and 17th centuries, this word in Europe meant "the order of learning by year". According to Jarvis (2004), John Dewey (1859-1952) was the first to introduce the term curriculum into educational theory. The first modern curriculum model was set up by Ralph Winfred Tyler. The Tyler's (1949) model is a highly simple model consisting of four steps:

1. Determine the school's purposes (aka objectives)
2. Identify educational experiences related to purpose
3. Organize the experiences
4. Evaluate the purposes

Since then, Basic Principles of Curriculum and Instruction has been a standard reference for anyone working with curriculum development. In the 20th century, a number of curriculum theories emerged. Posner (2004) states that people believe the concept of curriculum is one of the following:

- objectives of education;
- educational content;
- standards of knowledge;
- education strategies.

Lewy (1977) regards the curriculum as a process:

- definition of educational goals;
- selection of learning content;
- designing educational strategies;
- preparing educational materials;
- recruitment of teachers;
- evaluation of materials;
- implementation.

We believe that the curriculum items as defined by Levy are an appropriate starting point for evaluating the educational process. Levy writes about the

evaluation of materials, having in mind the formative evaluation of materials, which he believes must be done before the start of education. In our opinion, in the context of the evaluation of the educational process, all elements of the curriculum should be evaluated: the goals of education, the selection of the learning content; education strategies, educational materials, teachers, and implementation.

Evaluation of the objectives of education

In evaluating the objectives of education, we mainly have two things in mind:

- Are the objectives of education set at all?
- Is education conducted in such a way that the objectives are achieved, and is this verified at the end of the educational process?

By definition, education is the process of acquiring knowledge, skills, and habits. Organised education is usually conducted in a formal format, and is geared towards achieving certain goals. Benjamin Bloom contributed the basic definition of educational objectives. (1913-1999). Bloom (Bloom et. al. 1956) classified the educational objectives by content and hierarchy, and its classification is called Bloom's taxonomy.

In terms of content, the objectives of education are the following:

- **Cognitive objectives**: knowledge of facts, characteristics, laws, dependence.
- **Affective objectives**: responding to environmental stimuli, critical acceptance (awareness, willing acceptance, focused attention), formation of a value system.
- **Objectives in the psychomotor domain**: specific body movements, verbal and non-verbal communication.

According to the hierarchy, Bloom (1956) identifies the following stages of achieving the objectives of education: knowledge, comprehension, application, analysis, synthesis, and evaluation.

Evaluation of education content

The content of education must always be based on objectives. Evaluation of the content of education means checking whether the content of education follows the set objectives or purpose of education.

The objective of education for an individual is to be able to successfully participate in different life situations. Therefore, the goals of educating individuals can be classified according to different aspects of human involvement: occupational, civic, health, family, leisure, and others.

When the implementation level is reached while concretising the definition of education objectives, we often find that there are already differences between individuals in understanding the objectives of education, not to mention the choice of educational content. People have different ideas about what skills are needed and appropriate, and the concept has changed throughout history. In

the course of history, humanity has not even been united as to which god is real, so we cannot expect people to all have the same opinion as to what educational content is right.

Aristotle (384–322 BC) considered knowledge to be geometry, mathematics, and above all, practical wisdom and experience.

The first modern theorist to try to identify types of knowledge was Max Scheler (1874-1928). Scheler (1926) divided knowledge into seven types: myths and legends, knowledge implicit in everyday language, religion, mysticism, philosophy, mathematics, natural sciences, and humanities and technology.

Today's interpretation of the term "knowledge", as provided by Peter Jarvis, is interesting. Jarvis (2007) lists three different types of knowledge:

- **Rational** – the knowledge of proving things that are interpreted by reason and argument (e.g. in philosophy).
- **Empirical** – the knowledge of proving things that can be measured or calculated. For many, this is the main type of knowledge. Many claim that only what we can measure exists. Jarvis, however, replies that the facts also require interpretation.
- **Pragmatic** – purely about knowledge that can be put to good use.

Given the above, there is a great hazard that the evaluator evaluates the content of education according to criteria of a subjective type. This should be avoided at all costs. There are several options available. One of these is to observe the didactic principle of scientificity. It is this principle that requires that we teach educational content that is considered true in science. However, to find out what is true, we rely on current scientific publications. Therefore, the existence of these publications should be verified in the evaluation process.

Evaluation of the education strategy

When evaluating education strategies, we have two things in mind:

1. Is education conducted according to the principles of the science of education: pedagogy, andragogy, or didactics?
2. Do the education recipients acquire the knowledge through their own experience, or are they provided the experience of another person?

Principles of education

In practice, organised education takes place in different settings: it has mainly been conducted in school, however, with the development of IC technology, an increasing portion can also take place at home.

Therefore, in order to make the education process more successful, it is necessary to take into account the scientific findings about education and training. The science of adult education is called **andragogy**. The science of adolescent education (and training), or the general theory of education (and training), is called **pedagogy**. The scientific discipline of pedagogy that primarily

studies teaching is called **didactics**. Many refer to it as the science of instruction.

The science of teaching is called didactics. Each of these sciences has its own principles, but it should be noted from the start, that the principles are intertwined.

Every science encompasses people, such as Albert Einstein in physics, or Charles Darwin in biology. In educational theory these are: Jan Amos Kmenský (1592-1670), Johann Friedrich Herbart (1776-1841), Edward Lee Thorndike (1874-1949), and others.

Pedagogy, andragogy, and didactics are often intertwined, so we will refer to them as the science of education. Over the decades, science has come to many insights and developed some principles. For some principles, the original author is generally known, however, most of the principles have been widely accepted for decades, and it is no longer known who the original author is.

According to Esi (2010), principles have an orientation function. The orienteering function consists in giving a functional sense to the education process. So, through this function the teacher can justify the assuming and taking of a strategy at a didactic level. Therefore, the orienteering function allows a coordination regarding the teaching-learning-evaluating activity.

Esi (2010) classifies and describes the principles as follows:

Pedagogical principles

- The principle of communication
- The principle of knowing
- The principle of creativity
- The principle of materialisation

Didactic principles

- The principle of a conscious and active participation in the education process
- The principle of thorough acquisition of knowledge, skills, and abilities
- The principle of accessibility and individuality
- The principle of connecting theory with practice (5) The principle of systematisation and continuity
- The principle of intuition (of the unity between concrete and abstract; of the unity between sensorial and rational)
- The principle of reverse connection (of feedback or retroaction)

It should be noted that there are some other principles besides those stated above. In addition, it should be stressed that education also has local specifics, as a result of which, the interpretation of some principles in different settings is sometimes adapted to local specifics.

However, we believe that there are some general principles of science of education that should be followed in any evaluation. In our opinion, these principles are as follows:

The principle of appropriateness means that the content and methods of education must be adapted to the abilities of learners in the educational process.

The principle of conscious activity means that without the conscious activity of learners in the educational process, education cannot be successful.

The principle of clarity means that the facts, concepts, required skills, and other learning content, need to be explicitly explained or presented to the learners.

The principle of systematicity and gradualness means that the educational content should be systematically arranged, and provided in a logical sequence. The following principles are also associated with this principle:

- from easier to more difficult;
- from near to distant;
- from simple to complex.

The principle of linking theory to practice means that the learning content must be sufficiently useful for life. This principle means:

- education should be life-long;
- school should provide training in such a way that later work will be sufficiently "school-like".

The principle of permanence of knowledge requires that the learners permanently remember the learning content. This requires two things:

- Such teaching content needs to be chosen so that the learners will be able to master it on a permanent basis. So it is necessary to choose what is topical, and what the learners will actually need.
- Compliance with the principle of permanence of knowledge also means that active methods must be used to convey the learning content. However, the content must be repeated several times.

The principle of economic justification is a principle, the adherence to which, does not fall solely within the pedagogical sciences. It needs to be taken into account both at the macro planning level as well as at the level of the individual school, programme, year, department, and course.

Methods of education

The criterion for classifying methods of education is experience. In the case of an active learning method, the student acquires knowledge through his/her own experience, while in the case of a passive learning method, the student is merely provided the experience of others. Information can be provided to him/her through the teacher, or only through educational materials.

Evaluation of education materials

Educational materials are:

- **materials for learners** (text and other materials);
- **materials for teachers**, which include: defining the objectives of education, specifying the competences achieved, listing the learning

content with a definition of duration, listing the working methods, listing the obligations of the learners, literature list, etc.;
- **material resources for education**, such as: classrooms, didactic tools, offices, changing rooms, canteens, libraries, social areas, car parks, etc.;
- a stable source of financial resources is provided, for instance for: salaries and the professional development of staff, the maintenance of buildings, energy products, services, the maintenance of material resources for education, etc.

Material evaluation is aimed at determining:
- whether the organisation is familiar with the needs at all (does it have a financial plan, an asset management plan);
- the extent to which the organisation itself has the necessary resources, and the extent to which it hires them;
- whether the organisation meets its material needs in a timely manner, and whether it has a positive cash flow.

However, when evaluating materials for learners, at least the basic principles of the science of education should be considered:
- Does the organisation have in place at least minimum quality standards applying to materials for learners?
- Are the contents of the materials adapted to the learners' abilities?
- Do the materials encourage conscious activities of learners?
- Is the content presented clearly?
- Is the principle of systematicity adhered to in the design of the structure?
- Is the principle of economic justification respected?

Evaluation of teachers

For decades, the quality of teacher work has been known to have a significant impact on educational performance. Sometimes, we hear about someone who has extensive knowledge about the profession, but unfortunately cannot teach. Teacher work can be evaluated in more ways:
- in terms of adherence to the principles of educational science;
- in terms of knowledge of the teaching profession;
- in terms of the organisation or internal structure of individual learning units;
- in terms of communication and motivation for active learning;
- in terms of the use of aids;
- etc.

There are several aspects, and all are important. Studies on the quality aspect of instruction have shown that knowledge and skills must be presented in an organised and structured manner (Feldman 1989; Slavin 1995). In courses, teachers can achieve structure and organisation by, e.g. presenting information in an organised and orderly way, noting transitions to new topics, using clear

and simple language, using many vivid images and examples and rating essential principles (Slavin 1995).

Jereb, Ferjan and Jesenko (2009) conducted a survey on a sample of 1068 students at three universities in Slovenia: the University of Ljubljana, the University of Maribor, and the University of Primorska. They interviewed only students who had passed at least one year of study at university. They studied the influence of factors under the heading "quality of instruction" by determining the influence of 23 factors of quality. They found that factors from the "quality of instruction" group can explain 12.3% of the variance of exam results.

Teachers' work can be evaluated by direct observation. This means that the evaluator is physically present in the classroom. We distinguish between random or non-systematic observation, and systematic observation. Random observation is characterised by the observer's perception of what is currently attracting attention. In the case of systematic observation, the aspects of observation are selected in advance, the contents of the observation are pre-recorded, and the observations are promptly noted down. The observations are not only descriptive but also quantitative.

The systematic observation of the work of all teachers within an organisation (for example evaluation of the work of all professors at a university, or of all teachers at a school) cannot be carried out in an external evaluation, because it would be too extensive. That is why student surveys are conducted instead, at least at universities.

A student survey is an opinion survey whereby students express their opinions (evaluate) individual subjects and pedagogical work of higher education lecturers and faculty assistants. A survey as a method is not the same as direct observation, and students do not have the skills to be competent evaluators. A student survey is therefore not an evaluation:

- the methods of conducting student surveys are different from those of direct observation of teachers;
- in systematic observation, the observer should focus on the principles of didactics, but in practice, it is very often the case that the contents of the student survey are not related to the principles of educational theory, but rather to identifying satisfaction;
- in the latter case, a student survey has a conceptual background in the principles of marketing, and not in the principles of educational theory.

The contents of the surveys differ among higher education institutions.

The University of Ljubljana student survey, for example, has two content sections:

1. Opinion on the course
    - Generally speaking, I am satisfied with the course.

- The various work methods used in carrying out the course (lectures, practical classes, seminars, etc.) are coordinated.
- The work methods used in carrying out the course encourage me to think critically.
- The course literature and sources (articles, electronic sources, case studies, etc.) cover the subject content matter well.
- I am notified of my obligations for the course on time.
- All the relevant information regarding the course is published online.
- I believe continuous assessment in carrying out the course (in any form: mid-term exams, tests, homework, projects, seminars, etc.) is appropriate with regard to the nature of the course.

2. Opinion about the professor:
   - Generally speaking, the work of the teacher is of high quality.
   - He/she attends lectures well-prepared.
   - He/she explains the subject matter in an understandable manner.
   - He/she knows how to boost interest in the subject.
   - He/she encourages me to think critically.
   - He/she treats all students fairly.

(Source: Rules on Student Surveys at the University of Ljubljana)

The survey at the University of Maribor has four sections:
1. STUDENT (student assesses how often he/she has attended lectures/tutorials).
2. TEACHER or ASSISTANT (student evaluates the teacher/assistant who provided the lectures/tutorials)
3. KNOWLEDGE VERIFICATION (student evaluates knowledge verification).
4. DESCRIPTIVE OPINION (student has the opportunity to enter a descriptive opinion about the assessment).
(Source: Rules on Conducting Student Surveys at the University of Maribor).

As we can see from both examples, the content of the student survey does not match the content of curriculum items in at least one case.

Evaluation of implementation

Implementation includes:
- administrative and technical tasks;
- macro-organisation of pedagogical and andragogical process.

The content of administrative and technical tasks is the classic content of evaluations. Every evaluation covers, for instance, the student affairs office, the functioning of the information system, etc. The same applies to the macro-organisation, because the evaluation naturally cannot ignore the timetable.

The philosophy of accreditation

What are accreditations

The word “accreditation” has several meanings

- the fact of being officially recognized, accepted, or approved of, or the act of officially recognizing, accepting, or approving of something (Cambridge Dictionary);
- a systematic quality assurance process in which the government or peers external to the institution create and evaluate quality standards, competences, and integrity and credibility.Accreditation is the process in which certification of, is presented;
- official certification that institution receives once the standards of quality have been met.
- the process through which a school's services and operations are reviewed by an accrediting agency to determine if the school meets the minimum standards necessary to provide a quality education (Myers, 2019).

Above, we have described that the evaluation process examines the organisational model and curriculum. The object of observation remains the same in the accreditation process, but the main focus of the observation is on transparency, credibility, and integrity.

Both in evaluation and accreditation, we look for facts and evidence. If we evaluate by mechanistically determining whether an organisation adheres to the principles of educational science, the essence of the accreditation philosophy is the verification of transparency, efficiency, credibility, and integrity.

Ramaley (2006) describes the case of the *California State University Monterey* Bay (CSUMB) accreditation, according to the model of the Western Association of Schools and Colleges (WASC) and says that accreditation ais grand experiment designed to demonstrate how an institution could embody and advance its vision and demonstrate its institutional capacity and effectiveness in new ways, while, at the same time, advancing those goals in the very process of demonstrating them to its accreditors.

Ramaley (2006) furthermore states that the process of accreditation has two components, institutional integrity and educational effectiveness.
Institutional Integrity: The institution functions with clear purposes, high levels of institutional integrity, fiscal stability, and organizational structures to fulfill its purposes. **Educational Effectiveness:** The institution evidences clear and appro- priate educational objectives and design at the institutional and pro- gram level, and employs processes of review, including the collection and use of data, that assure delivery of programs and learner accom- plishments at a level of performance appropriate for the degree or cer- tificate awarded.

The expectations were:

1. The development and more effective use of indicators of institutional performance and educational effectiveness to support institutional planning and decision making.
2. Greater clarity about the institution's educational outcomes and criteria for defining and evaluating these outcomes.
3. Improvement of the institution's capacity for self-review and of its systems of quality assurance.
4. A deeper understanding of student learning, the development of more varied and effective methods of assessing learning, and the use of the results of this process to improve programs and institutional practices.
5. Systematic engagement of the faculty with issues of assessing and improving teaching and learning processes within the institution, and with aligning support systems for faculty more effectively toward this end.
6. Validation of the institution's presentation of evidence, both to assess compliance with accreditation standards and to provide a basis for institutional improvement.
7. Demonstration of the institution's fulfillment of the Core Commitments to Institutional Capacity and Educational Effectiveness.

Accreditation agencies develop standards for accreditation that serve as benchmarks for accreditation decisions. As part of a school's self-study, school personnel, students, and the community address each standard by describing how well the school meets it and, if it does not, how it plans to do so in the future. Myers, S. (2019) divided standards into the following substantive sets:

- Teaching and Learning Standard - Mission, Beliefs, and Expectations for Student Learning;
- Teaching and Learning Standard – Curriculum;
- Teaching and Learning Standard – Instruction;
- Teaching and Learning Standard – Assessment;
- Support Standard - School Services;
- Support Standard - Facilities and Finance;
- School Improvement Standard - Culture of Continual Improvement.

The presentation of different approaches to accreditation

Accreditation can be compulsory or voluntary.

Public study programmes in countries must be accredited. They are accredited by a designated agency for quality in higher education. The Council for Higher Education of the Republic of Slovenia (SQAA) was established in 1996 to develop internal and external quality systems in the Slovenian higher education area. The European Association for Quality Assurance in Higher Education (ENQA) is an umbrella organisation which represents quality assurance organisations. ENQA is a membership association which represents its members at European level.

Voluntary accreditations are also well established. The philosophy of voluntary accreditation stems from the concept of social responsibility.

The term corporate "*social responsibility*" means that companies voluntarily assume responsibility for various social, economic, environmental, and cultural issues. The idea that companies should also address these problems goes back to the 19th century. During this period, companies began to offer workers living quarters in settlements adjacent to factories.
The term "social responsibility" was first used by Howard Bowen in 1953, in the book *Social Responsibilities of the Businessman.* (Demmerling, 2015).

Since the first mention, a number of definitions of the term "social responsibility" have emerged. As many as 37 have been analysed by Dahlsrud (2008). He observes that most of them distinguish between three main dimensions of social responsibility:
The social dimension of social responsibility reflects the relationship between the company and society as a whole. It also includes attitudes towards employees and practising fair trade principles.
The environmental dimension of social responsibility refers to the environmental impact of the company and the use of renewable energy.
The economic dimension of social responsibility refers to the responsibility for the operating result. This should of course be positive (profit). It also applies to other socio-economic or financial aspects of the business, including a description of responsibility for all business operations.

When referring to the definitions of social responsibility, the "*Carroll Pyramid*" is often mentioned. In it, Carroll (1979) provides a hierarchy of four company responsibilities:
Economic responsibility is binding. The number one obligation and responsibility of a company is to be profitable. Profitability is the only way for a company to survive, and is beneficial for society in the long run.
Legal responsibility is binding. It is an obligation to abide by laws and regulations.
Ethical responsibility is voluntary. It is the responsibility and willingness for a company to act morally and ethically.
Philanthropic responsibility is voluntary. It is the responsibility and willingness to give a part of the profits back to society. The responsibility is discretionary, but still important.

The principle of voluntary accreditation is very similar to "brand" philosophy.
Slade (2016) says that an organisation's brand also contains a "promise." A "promise" can be written or not. An organisation's brand promise is much more than the name, logo, symbol, or origin of the product. Similar to a "brand", accreditation acts as an unwritten assurance contract. The assurances relate in particular to:

- **Trust** – belief in the fulfilment of a "promise";

- **Legitimacy of action** – compliance with legal norms, appropriateness and desirability of actions in terms of socially accepted norms, values and expectations.
- **Correctness and consistency** – is focused on the management's performance in project implementation.
- **Reliability** – means competences, benevolence, and integrity:
  - **competences** are knowledge and abilities;
  - **benevolence** expresses a willingness to solve potential problems and do good things;
  - **integrity** means respecting social norms and ideals.

The well-known voluntary accreditations in higher education in business sciences are, for example:
The European Council for Business Education (ECBE), EQUIS, AACSB, etc.

Unlike evaluations, the object of observation in the accreditation process is usually more practice-oriented. The latest study to prove this was published by Blouin, Tekian, Kamin, and Harris in 2018. They did a study on a sample of 17 medical schools in Canada.

The nine themes representing the impact of **accreditation** on processes related to: (i) governance, (ii) data collection and analysis, (iii) monitoring systems, (iv) documentation, (v) creation and revision of policies and procedures, (vi) continuous quality assurance and improvement, (vii) faculty members' engagement, (viii) academic accountability and (xi) curriculum reforms

As a rule, ethical considerations and financial management are also important subjects of evaluation for voluntary accreditation.

Cohen (2019) that this final section may make some uncomfortable, but the reality is that a large part of job as schooll manager is making decisions that directly involve money. In fact, schoool manager makes financial decisions every day.

Approaches to accreditation can be very different. Below, we will show an example of mandatory and voluntary accreditation.

SQAA accreditation
In 1996, the Slovenian Quality Assurance Agency was established to develop the internal and external quality systems in the Slovenian higher education (SQAA).

The mission of the SQAA is to "provide for the development and operation of the quality assurance system in the Slovenian higher education area". (www.nakvis.si)

The SQAA decides on: accreditation of higher education institutions, accreditation of study programmes: first degree, second degree, third degree, joint study programmes and advanced study programmes, transformation of higher education institutions, and changes of the compulsory components of study programmes of independent higher education institutions.
The SQAA assesses the eligibility for accreditation of higher education institutions and study programmes, according to this "Criteria for the accreditation and external evaluation of higher education institutions and study programmes". The criteria (based on SQAA assurances) takes into account the agreed quality assurance standards and guidelines applicable in the European Higher Education Area. The SQAA is a member of the European Association for Quality Assurance in Higher Education (ENQA). The ENQA is an umbrella organisation representing quality assurance organisations in Europe.

According to the SQAA Criteria, higher education institutions are evaluated for the needs of accreditation in the following areas:

1. **Integration with the environment** (cooperation with the corporate sector, employment opportunities);
2. **Functioning of the higher education institution** (mission, vision, strategy, internal organisation, definition of study areas, quality of learning outcomes, demonstrated scientific and research work, agreements with companies on practical training);
3. **Human resources** (appropriate number and structure of participants in the process, appropriate valid habilitations, existence of habilitation criteria, ability to form a senate, existence of professional associates, existence of a student affairs desk head);
4. **Students** (advisory services related to enrolment, involvement of students in research and teaching work, guaranteed possibility of organising students);
5. **Material conditions** (proof of ownership or lease of premises, assessment of required financial resources, ICT equipment, library);
6. **Quality assurance**, innovation and development orientation (existence of quality rules).

The fulfilment of the criteria is verified by an external evaluation by the members of the evaluation committee appointed by the competent SQAA body. Only persons registered in the SQAA Register of Experts may be evaluators.
The first accreditation evaluates eligibility. Subsequent accreditations evaluate progress and development since the last accreditation. SQAA accreditation is mandatory for all public study programmes. The process of obtaining accreditation after the application is submitted involves three steps:

- appointing a committee at the competent SQAA body;
- evaluation;
- review of the report by the competent SQAA body.

ECBE accreditation

ECBE, the European Council for Business Education, is an international non-profit accreditation agency, registered in Brussels. It is committed to supporting academic and professional learning institutions in economics, business, and related fields. Through its accreditation procedures, the ECBE helps to ensure that the accredited members meet the requirements of the European Higher Education Area (EHEA), as set out in the Bologna Process and other EU Directives. (www.ecbe.eu)

ECBE accreditation is independent and voluntary. The process of obtaining accreditation involves three steps:

1. The faculty must carry out self-evaluation, following detailed instructions from the ECBE.
2. The peer review team (designated by the ECBE Board of Commissioners) verifies the self-evaluation data, visits the site, conducts interviews, and produces a report. This recommendation report is then submitted to the Board of Commissioners.
3. The Board of Commissioners reviews the evidence, the self-evaluation report, and the recommendations, and then decides whether to award accreditation. This decision is then forwarded to the ECBE Board of Directors for confirmation.

According to the ECBE Criteria, higher education institutions are evaluated in the following areas:

Issues related to the institution:

A brief history of the institution.
Mission.
Governing body.
Programme and credit level descriptions.
Quality assurance policies and procedures.
Faculty/Academic staff development.
Information systems.

Business School/College

Presentation.
Organisational structure.
Policies and procedures.
Procedure for developing existing programmes.
Procedure for developing and evaluating new programmes.
Business Processes - A Brief Description.
Contents of the Student Handbook.
Quality assurance policies and procedures.
Faculty business standards.
The actual competences of the graduate.
Resources.
Information systems.
Credit points.
Connections with industry and trade.

The role of industry and economic organisations.
Detailed study programme analysis
Content.
Structure.
Materials.
A report should be drawn up for those areas. In some sets, "*yes/no*" answers are required. The report should be accompanied by 11 annexes or appendices, such as:
Management structure.
Student survey questionnaire
Standards for meeting the Bologna criteria.
CV of professors.
Examples of course syllabuses.
Faculty standard on assessment.
etc.

Critical analysis of individual approaches
Critical analysis is based on the author's knowledge of the theory, on the SQAA and ECBE documents, on the scientific study of management in education, and on concrete personal experience. Critical analysis is presented, based on eight years of faculty management experience. During this time, the faculty has been evaluated three times by the ECBE. The faculty as a whole was evaluated by the SQAA. Several study programmes were in the process of accreditation or re-accreditation.
Critical analysis represents the personal opinion and views of the author, but does not represent the official opinion of the institution, or the official positions of the bodies of the faculty or university where the author is employed.

SQAA

ADVANTAGES:

- Existence of criteria for first accreditation.
- Significant emphasis on connecting teaching and research work.

WEAKNESSES:

- The evaluation is based on self-evaluation reports.
- Questionable verification of the content of self-evaluation reports.
- Actual workload for 1 ECTS is not checked at all.
- The actual achievements of the graduate are not checked.
- Operation is not checked.
- The same criteria for the first accreditation and the re-accreditation.
- Re-accreditation does not involve checking the actual implementation of the study programme based on the detailed report.
- Different composition of committees, and thus different interpretation of criteria.

ECBE

ADVANTAGES:

- Actual verification of the authenticity of the content of self-evaluation reports (in detail).
- Detailed study programme analysis.
- Detailed analysis of a student's actual obligations.
- The actual competences of the graduate are checked, and the operations of the faculty are checked.
- Great emphasis on environmental integration.
- The actual implementation of the programme is checked.
- The committee is headed by the same person – always and everywhere.
- All curriculum aspects of the programme (objectives, content, materials, providers, implementation, outputs) are reviewed in detail.

WEAKNESSES:

- The criteria is very loose; this is compensated for by the fact that the committee is headed by the same person – always and everywhere.
- Little emphasis on research work.
- Sometimes evaluators do not understand the specifics of each country.
- Sometimes evaluators do not understand the legal framework in a particular country.

Evaluation methods

Depending on the selected method, we distinguish between:

- scientific evaluations; and
- practical evaluations.The method of evaluation and accreditation must be chosen in such a way as to allow us to find the facts and evidence on which to base the conclusions of the evaluation.

Scientific evaluations

The essence of scientific evaluations is to try to find a link between cause and effect through scientific research methods. The scientific research method must be such that the research can be repeated under the same conditions. At the beginning of the scientific evaluation, a hypothesis is made. The hypothesis is usually proposed in such a way that variables appear in it. Data on the value of variables must be measured according to objective type criteria. The measurement must be direct. The methods can be different:

- study of documentation;
- collection of archival data;
- surveying;

- targeted interviews;
- direct measurement of concrete states and processes.

Once the values of variables are measured, it is usually necessary to first determine the reliability of the measurement, followed by a calculation of the dependencies and drawing of conclusions on that basis. The dependencies are calculated using statistical methods such as: calculation of correlation coefficient, regression analysis, factor analysis, test of equality of arithmetic mean, ANOVA test, etc.

It is characteristic of scientific evaluations that each time we conduct a research under the same conditions, the same results of measurement of the values of the variables, and the same results of calculating the dependence between the variables, must be obtained within the confidence interval. Scientific evaluations must therefore be absolutely objective.

At the Faculty of Organisational Sciences of the University of Maribor, the first large-scale scientific research on the content of the evaluation was conducted years ago (see Jereb, Ferjan, Jesenko, 2009). Since then, similar research has been repeated, but on a much smaller scale.

We interviewed 1,068 students at three universities in Slovenia: University of Ljubljana, University of Maribor, and University of Primorska. We only surveyed students who successfully completed at least one year of study.

The dependent variables were the categories based on which we can “measure” the performance of study:

- the grade received in the latest exam taken;
- the number of repetitions of the last successfully passed exam; and
- time (in months) spent completing the year that the respondents last successfully completed.

Based on the results of previous empirical research and the discussions of other authors, we set up a “conceptual model of student progress in higher education”. The following five key factors were considered in our model, which we treated as “independent variables”:

- social elements;
- factors related to the student;
- quality of teaching;
- curriculum;
- government.

We posed 45 questions in this regard.
Below, we summarise the key findings of this research:

- We believe that the “mental capacity of the student” is the most important factor for success in studying.

- "Social elements" did not affect the examination grades and the duration of the studies.
- We identified statistically significant differences between men and women. Women spend more hours a week studying, but there are no gender differences in exam grades.
- We also identified statistically significant differences between part-time and full-time students. Part-time students spend half the number of hours studying per week compared to full-time students, but there are no statistically significant differences in exam grades, or the number of retakes between full-time and part-time students.
- The variables from the "quality of teaching" group (learning content, organisation of the pedagogical process, materials, communication between student and professor, exam) can explain 12.3% of the variance of the variable "exam grade".
- Students receiving scholarships complete their studies more quickly.
- There are no differences in student performance between students staying in dormitories and those not staying in dormitories.
- Frequency of participation in lectures does not affect the grade in the exam.
- The "weekly study time" variable does not affect the exam grade (which is surprising).
- Student work has an impact on both the grades received and the length of the study.

A great advantage of scientific evaluations is that, given a large enough sample, data on cause-and-effect relationships can be obtained. The downside, however, is the large scale and associated high costs. Due to the large scale and high costs, it is impossible to conduct them in everyday practice. Therefore, only practical evaluations will be considered below.

Practical evaluations

The methods applied in practical evaluations are usually different from those used in scientific research. We use:

- interviews;
- benchmarking;
- working with documents;
- observations.

The most commonly used, but also the most problematic method of practical evaluations, is interviews. Interviews should be structured, which means that evaluators should differentiate the aspects of the questioning for each group and prepare questions in advance, while during the interview itself, they have to record the observations regularly. The evaluators usually interview the management, administrative staff, teaching personnel, students, and graduates. Usually the interview is not a direct observation of the object, so this method is absolutely not suitable for measuring the values of variables. Likewise, it is not

necessary for people to speak of facts, they may give subjective interpretations. On the other hand, it is precisely these phenomena that make this method appropriate for an experienced evaluator to easily create a picture of the collective ambitions, organisational model, and competences and engagement of the staff, through interviews.

Benchmarking means comparison. Benchmarking creates a point of reference against which something can be measured. (Hernon, Matthews, Dugan, 2014). The advantage of this method is that it allows the exchange of good practices. The problem arises when evaluators in international accreditation processes come from different backgrounds and try to impose solutions. It may occur that they do not understand the legislative and cultural differences that make it impossible to transpose a solution from one environment to another. It may also occur that evaluators come from organisations that may be competitors of the evaluating institution. In such a case, the climate is not good. Schools are also competing in the market. They are literally stealing solutions and ideas from the environment they are evaluating.

Evaluators usually review different documents: curricula, schedules, and internal rules of the organisation. Financial statements are less frequently reviewed. However, financial statements are the document from which it can be very precisely discerned how an organisation operates.

In evaluation practice, one can experience many things. Employees interviewed by evaluators are prepared, often trained, for interviews. On the other hand, we sometimes come across individuals or groups who do not wish the organisation well.

If the evaluators are inexperienced, the content of the report may be internally inconsistent in such cases. For example, at some point in the report, evaluators note that relationships in the organisation are good, that performance is excellent, and in another section they state that employee relations are poor, departmental cooperation is weak, etc.
When it comes to accreditation, it is important for the evaluator to review the curricular aspects: objectives of education, content, organisational forms and methods, educational materials, and implementation. As mentioned earlier, accreditation nevertheless represents a “promise”, so the observer must, through observation, create his/her own idea of transparency, efficiency, credibility, and integrity.

The key disadvantage of practical evaluations is that they are subject to the subjective interpretations of the evaluators, which is why we will proceed by explaining the reasons for this phenomenon, and suggestions on how to prevent it.

Of course, it is imperative that the evaluator is objective. However, in practice, interpretations are often (if not nearly always) subjective. Quite often, biased evaluators are blamed for subjectivity. Sometimes justifiably so – which is wrong. Still, the problems with the objectivity of practical evaluations most frequently arise at the unconscious level of the evaluator, and stem from completely different reasons:

1. In the process of perception and cognition, it is the very nature of the processes that prevents avoiding the “subjective factor” and the influences of the social environment.
2. Scientific evaluations require the values of the variables to be “measured” directly, while in practical evaluations, the methods of observation and the methods of drawing conclusions are generally different; it is not at all necessary that the object of evaluation is also the object of direct observation; for instance, we can only discuss it.
3. People experience time-bound changes.

Perception and cognition and the importance of evaluator calibration

As mentioned above, an evaluator must find the facts and evidence on which to base his/her evaluation conclusions. In practice, the “subjective factor” of the evaluator is very important in the evaluation process. It is a phenomenon of perception and cognition. People, as such, can perceive the same thing differently, and differences can be intensified by the inclusion of the social environment. The conclusions of the evaluations may depend on the perception and cognition of the evaluators, and we all want the evaluations to be as objective as possible.

From a medical point of view, perception can be described by the fact that the object of perception is first perceived by the senses (e.g. eyes, ears), and the “perceived signals” are transmitted from the senses via the nervous system to the brain. They are mentally processed in the brain. Based on perceived stimuli and mental processing, a "re-establishment” occurs in the brain. This is called perception. (Goldstein, 2009). From a medical standpoint, the occurrence of perception has a purely physical background. This means that perception involves multiple processes, a "mechanistic" perception of stimuli from the environment, the conversion of stimuli (e.g., light, sound) into electrical impulses, the transmission of signals over the nervous system, and the re-establishment in the brain, which medicine can at least to some extent explain with the laws of physics and biochemistry.

There are differences between people:

- in the physiognomy of the senses, and consequently, in the abilities of perception;
- in biochemical and other processes in the nervous system and brain, which affect perception.

Perception in humans has also been shown to be influenced by genes. Petrone et al (2016) cite and describe a number of studies since 1983 that have confirmed this.

Psychologists are offering a slightly broader definition. Perception is the cognitive process of assigning labels to the incoming signal. This is the case, whether the signal is auditory or visual, or derived using any other modality for sensing events in the world outside the human organism. (Tatham, Morton, 2011). Perception is made on the basis of the sensations from the senses, as well as the information that a person already has in his/her memory, in connection with the mental interpretation of the world outside. This means that perception is not a direct mapping of the outside world.
Different people may perceive the same object from the physical environment differently, despite the absence of impacts from the social environment.

Differences between people in the perception of the same stimulus, are not simply due to differences in physiognomy and genes. They also arise because there are differences between people in judging or evaluating what individuals use as a “standard” or “frame of reference”. (Aronson et al. 2010).

Perception is thus a biological process described by medicine and psychology. Perception takes place without involving the social environment. Although, at least theoretically, perception is a process that takes place without the inclusion of the social environment, standards or frames of reference are created precisely under the influence of the social environment.

Cognition or cognisance occurs when the social environment is involved in the process. Cognition is a **process of understanding**, based on the perception of stimuli from the physical world, and the interactions of the individual with the physical and social environment. The social environment is thus also included in the process of cognition.

Marcum (2014) states that at individual level, cognition is not possible at all without perception, and lists six environmental factors that affect the output of the cognition process:

- **Environmental situation factor**: the same perception (the same input to the process of cognition) in different environmental situations, can lead to completely different outputs.
- **The time component** means that the same perception at different time periods, can lead to completely different cognition.
- **The “release” effect** - sometimes, in order to draw conclusions within a set of perceptions, exactly the one that a person wants, appears. Based on this perception, a person can reach a completely wrong conclusion.
- **Trigger mechanism** - the inclusion of the environment is necessary for the process of acquiring knowledge and understanding at individual level.

Without the involvement of the environment, perception at individual level exists, but there is no cognition.

- Cognition may be a **result of a past action** or behaviour.
- Cognition can also be an **adaptation to the environment**.

Time-bound changes occur for various reasons. Reasons arise both at individual and environmental levels.

The circumstances we have described require calibration of the evaluators, before the evaluation. The word “calibration” comes from technique, more specifically from measurements. **Calibration** is a comparison between a known measurement (the standard).

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Appendix

QUESTIONNAIRE

Athlete friendly education (AFE) is a type of education which is continually planning, organising and improving a system of adaptations included in a school's educational process and infrastructure; these adaptations are implemented on a voluntary basis and in a benevolent, systematic, comprehensive and transparent manner, with the explicit aim to help athletes engage in sport and simultaneously achieve goals and competencies set out in the educational programme and thus successfully complete their education.
Athlete friendly education has the following **attributes**:

- adaptations;
- rather than being discrete, these adaptations constitute a system;
- adaptations are organised and managed by school management;
- institutions introduce the adaptations voluntarily;
- adaptations are based on pre-existing legal frameworks and internal institutional regulations;
- institutions need to possess adequate competencies or experience, in other words, they need to be »trustworthy«.

A **system of adaptations** is a collection of individual components that form a logical whole; the interconnections between them are all aimed at a common goal. The aim of adaptations is to help athletes engage in sport and simultaneously achieve goals and competencies set out in the educational programme and thus successfully complete their education.

The aim of evaluating athlete friendly education is to find facts and proof of the existence of all the attributes of athlete friendly education.
This can be achieved with the aid of an evaluation questionnaire. An evaluation questionnaire looks at all the attributes of athlete friendly education. It is merely a conceptual and concrete starting point of an evaluation and should be understood as a dynamic support guiding the structure of an interview; it is not a static compendium of determinate questions. It also does not serve as a basis for scoring or ranking. The task of the evaluators is to determine—with the aid of an evaluation questionnaire—the existence or non-existence of attributes of athlete friendly education.

QUESTIONS

Collective ambitions of schools – general
Do schools have a defined mission of organisation?
Do schools have a defined vision?
Do schools demonstrate an environmental impact (e.g. general government policy, professional solutions)?

Do schools have milestones in their development? ("We have been doing it this way ever since")
Do schools have strategic priorities identified?
Do schools have their own brand (slogan, promise, etc.)?
Do schools write down their values?
Do school leaders behave in a distinctive/typical/different way from others?
Can schools demonstrate staff and student participation in management?
Can schools demonstrate the participation of the environment (sports federations) in the formulation of objectives - related to the education of athletes?

Competences for working with athletes
Can schools demonstrate any existing experience in working with athletes?
Can schools demonstrate the use of specific skills in working with athletes?
Can schools demonstrate the use of methods of working with athletes?
Can schools demonstrate involvement in interaction with sports federations?
Can schools demonstrate interaction with professional associations in the field of sports (e.g. school involvement with the sports sphere)

Commitment to work
Do schools systematically measure staff engagement in general?
Do schools systematically measure staff engagement in working with athletes?

Organisational model
RATIONAL ORGANISATION
Is the operation of schools rule-based (general rules relating to: students)?
Is the criteria for gaining student-athlete status written?
Is the duration of student-athlete status defined?
Are special rights arising from student-athlete status defined?
Are special duties arising from student-athlete status defined (for instance, the student-athlete also represents the institution, etc.)?
Is the procedure for obtaining student-athlete status formally defined?
Are the powers of the school staff clearly defined?
Is the internal organisation of schools impersonal (processes function in the same way, regardless of who is employed)?
Is the work done by specialists (for example, is a psychologist really a psychologist by education…)?
Is there a hierarchy and authority within the schools?

Learning organisation – related to working with athletes
Is there a common mental model within schools - related to working with athletes?
Is there a shared vision within schools - related to working with athletes?
Is there teamwork in schools - related to working with athletes?
Is there systematic problem solving and systemic thinking present in working with athletes?

INSTITUTIONALISED ORGANISATION
Is there a general code of ethics for students in schools?
Is there a general code of ethics for the staff in schools?
Is there a general perception of fair and just treatment of all employees in schools?
Is there a general perception of fair wages for employees in schools?
Is there a general perception of fair pay differentials, based on the complexity of work, in schools?
Is there a general perception of a culture of quality in schools?
Is there a general perception in schools of a difference/distinction of the organisation from others?

Split organisation
Do school staff emphasise the (same) essential features of the organisation - related to working with athletes?
Do school staff outwardly convey the same (non-contradictory) messages - related to working with athletes?

EVALUATION OF PROCESSES:
Defining educational goals;
Can schools demonstrate social importance - related to working with athletes?
Do schools monitor the situation in the environment - social relevance - related to working with athletes - e.g. trends in athlete education?
Are school objectives subject to regular self-evaluation?
Are school objectives subject to regular external evaluation?

Choice of learning content;
Are there adaptations made to learning content (personalised programme) for student athletes?

Preparation of educational materials;
Are there specific material resources for the education of athletes?:
Special classrooms for athletes
Special didactic aids for athletes
Special ICT equipment for athletes
Special changing rooms for athletes
Special canteens for athletes
Special libraries
Special residential facilities for students (student dormitory/boarding house) for athletes
Special premises for athletes to socialise
Car parks for athletes

Recruitment
Is there any formal criteria in the schools for the required teacher education - general?

Do all the teachers have the required formal education - general?
Is there training provided to school staff for working with athletes?
Is there a guidance counsellor - related to working with athletes?
Is there an educator - related to working with athletes?

Implementation
Are school rules publicly available (brochure/web)?
Do schools publish a guide for students - general?
Is there a formally defined method of informing students of the schedule - general?
Is there any tutoring (additional learning aid for athletes)?
Is there a student affairs office for students - general?
Is there a formal mechanism for monitoring student performance?
Is there an individual approach in schools to an individual athlete?
Are there activities outside the prescribed curriculum, designed to develop the integral development of athletes (new knowledge and skills)?

Material training resources in schools:
Is there an annual training infrastructure in schools?
Is there a winter training infrastructure in schools?
Is there a health care facility for athletes in the proximity of schools?
Is there an option of athlete transport in schools?
Are there sports changing rooms in schools?
Are there canteens serving sports nutrition in schools?
Are premises for sports equipment available in schools?
Are there facilities to wash clothes and sports equipment in schools?

Human resources for training:
Is physiotherapy for athletes available in schools?
Are rehabilitation services for athletes available in schools?
Is psychological support for athletes available in schools?

Organisational training resources:
Is there a customised schedule for athletes in schools (conduct of lessons)?
Is there time set aside for training in schools?
Is there time set aside for regeneration in schools?
Are schools provided with a stable source of funds for:
salaries?
professional staff development?
building maintenance?
energy, services?
storing material resources for education?

REVIEWS

I often say that we, Slovenians, have sport in our DNA. Many of the results of Slovenian athletes and teams show that. But not only that, more than 60% of the population is regularly involved into some sports activity. Which is not a coincidence. It is the long term effect of developing the system of sport and sport activities from the kindergarten on, a result of many dedicated people in sport. The system has to be thoroughly planned, evaluated and improved all the time.

One of the areas which we all have not been enough aware of for a long time, is a dual career of athletes. Their school, academic life, has been in the past just a part of the normal school activities and programmes. Being heard and seen by the teachers who were dedicated to sport, many of them have found their academic and professional way, too. Many did not. Therefore, is so important that nowadays, we build a modern and systematic approach for the education of athletes – from the primary school on. As the authors of this book say: *it is to build and offer a friendly education to every athlete.* As a former Minister of sport of Republic of Slovenia I strongly supported that. And as university professor I always will. We have a lot of dedicated, highly motivated sport talents, being supported by their families, parents, clubs, associations, coaches, tutors. But at the end of the day, when the athlete career ends, they need to step in another qualified shoes of life - and it is our responsibility to give them that opportunity, to enable a flexible and accessible way of studies and to prepare them for the after sport career life. Therefore, I really appreciate the book which is in front of us – showing different approaches, methods and experiences of supporting the athletes in their study careers, evaluating this approaches and showing us some good practice examples, also challenges which still need to be resolved. What is most important, is, that the prevailing school system encompasses and supports AFE and makes it inclusive, that institutions adapt flexible approaches and methods of teaching and supporting the athletes; and that teachers and tutors develops competences to work with such talents and dedicated young people. But all these have to be supported from the top down and implemented from the bottom up. Hand in hand with all stakeholders involved. The authors of this book do not only show us, what can we learn through experiences and evaluations of different concepts, but predominantly, to be constantly aware why we need to take into consideration the career of every (elite) athlete or any young sport potential from the kindergarten on. There could be not better role models to young generation than their successful sport mates, sharing proper values for life and work: dedication, motivation, hardworking, constant learning, proactiveness and high responsibility. Let support them and develop more knowledge and expertise which can constantly improve education systems, prepare and educate people involved, raise social responsibility and awareness to athlete friendly education.

And who should read this book? Officials, teachers, tutors, sports and education decision makers… But also trainers, coaches, parents. Everyone who understands why AFE needs its proper place in the life of every athlete.

Prof. Maja Zalaznik, PhD.
School of Economics and Business, University of Ljubljana
Former Minister of Education, Science and Sport of RS

The »Athlete Friendly Education« monograph includes five chapters:

- The transition of elite student-athletes from a career in sports to professional careers
- The effect of adaptations on the academic success of athletes
- Developing e-learning courses
- Engagement and burnout of secondary school students of the regular and sports departments
- Evaluations, evaluating, accreditation, and the importance of evaluator calibration

The first chapter describes the need for planning a double career for athletes, what a dual career is, and how to implement two careers in practice.

The second chapter presents an empirical study. The results show that curriculum and school functioning adjustments affect athletes' performance in school.

The third chapter describes the theoretical and practical guidelines on how to implement e-learning. It is e-learning that enables a high school or university student-athletes to participate in the educational process at the school or the faculty.

The authors also performed a comparative analysis of the commitment of high school students in the classical and sports departments. Based on the results, they refuted the stereotype that athletes are more committed to sports than to schooling. The fourth chapter presents these findings.

In the last chapter, the authors extensively describe the field of evaluations. The content can also be used as a list of attributes to consider for a school to become athlete-friendly. Therefore, the content is useful for future evaluators as well as for school management.

The book answers the question of what "Athlete Friendly Education" is, why it is needed, and how we implement it. It presents the results of the authors' original studies.

The method of writing meets the standards of a scientific monograph, and I certainly recommend the book for reading.

Prof. Edvard Kolar, PhD.

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