Physical activity in preschool-aged children - vocabulary analysis of articles written in english language

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PHYSICAL ACTIVITY IN PRESCHOOL-AGED CHILDREN – VOCABULARY ANALYSIS OF ARTICLES WRITTEN IN ENGLISH LANGUAGE

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TEMA I NASLOV ZAVRŠNOGA RADA: PHYSICAL ACTIVITY IN PRESCHOOL-AGED CHILDREN – VOCABULARY ANALYSIS OF ARTICLES WRITTEN IN ENGLISH LANGUAGE

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SAŽETAK

Znanstveni članci namijenjeni su određenom području, polju ili profesiji, a svrha im je ukazivanje na trendove i iznošenje rezultata istraživanja i analiza vezanih uz pojedino područje. Njima svakako pripadaju i znanstveni članci odgojiteljske i kineziološke struke te samim time i članci koji se bave tjelesnom aktivnošću predškolske djece. U ovom završnom radu analizirat će se stručni termini specifični za navedenu tematiku tjelesne aktivnosti predškolske djece i stil izražavanja u odabranim člancima na engleskom jeziku. Uz analizu stručnih termina rad također sadržava i pojmovnik najčešćih stručnih termina i izraza karakterističnih za tematiku tjelesne aktivnosti djece predškolske dobi.

Analizirani članci nisu predodređeni samo za odgojitelje već za sve ljude koji pokazuju interes za odgoj djece predškolske dobi i planiranje njihovih tjelesnih aktivnosti. Analiza stila izražavanja u znanstvenim člancima pokazala je da svi analizirani članci koriste formalni, znanstveni stil. Analizom vokabulara odabranih znanstvenih članaka utvrđeno je da u navedenim člancima prevladava stručni vokabular vezan za odgojiteljsku i kineziološku struku. Naposljetku, može se zaključiti da bi analizirani članci trebali biti razumljivi svakom odgojitelju, kineziologu, ali i većini ljudi koji su ovladali općim engleskim jezikom.

Ključne riječi: analiza stila izražavanja, analiza vokabulara, pojmovnik stručnih termina, znanstveni članci.

SUMMARY

Academic articles are intended for a specific area, field or profession. Their purpose is to show trends and most recent research results and analyses for a specific area. Surely, academic articles regarding the upbringing of preschool children and their physical activity also belong in that category. The goal of this thesis is to analyse professional terms used in relation to the previously mentioned theme of physical activity in preschool-aged children and the style of selected academic articles published in English. In addition to the analysis of professional terms, the thesis also contains a glossary of the expressions and terms most commonly used while writing about physical activity in preschool-aged children.

The analysed articles are not intended only for preschool teachers but for everyone who shows an interest in the upbringing of preschool-aged children and planning their physical activities. The analysis of the academic style in the selected articles has shown that formal academic language is used in all of them. Vocabulary analysis has also shown that formal academic language specific to the fields of kinesiology and early and preschool education prevails. Finally, the conclusion can be drawn that the analysed articles are likely to be understandable to every preschool teacher, kinesiologist, as well as to most people with satisfactory knowledge of general English language.

Key words: academic articles, analysis of the academic style, glossary of specific terms, vocabulary analysis.

1. INTRODUCTION

The ability to understand and actively use the English language is considered to be a *conditio sine qua non* for every person who wants to be an active and contributing member of the modern society. A person with a good knowledge of English is the one who can find new information and knowledge with minimal effort and almost everywhere in the modern society. Therefore, it is crucial for this information to be accurate and precise.

One, if not the best, way to get as accurate and as precise information as we can are academic articles, which are written by experts from their respective fields, and have to be approved by other experts (peer reviewers) before being published. Academic articles cover the most current topics and present research results, theories and analyses from a variety of fields, one of which is also the field of early and preschool education. In these articles readers can find new approaches, studies and innovations related to this field as well as the field of kinesiology which deals with physical activity in preschool-aged children.

The goal of this thesis is to analyse language and vocabulary specific to physical activity in preschool-aged children. The vocabulary and language analysis will be conducted on eight academic articles which discuss physical activity in preschool-aged children and have been published in English.

This thesis will begin by explaining the subdivisions of the English language and the main characteristics of the standard and academic English. In the follow-up there is an explanation and the main features of academic writing style and structural characteristics of academic articles. For all of the topics, i.e. characteristics of academic style, examples of explained principles and characteristics from eight academic articles focusing on physical activity in preschool-aged children are provided. There is also an analysis of specific terms found in the selected articles and a glossary of terms and expressions specific to the topic of physical activity in preschool-aged children.

2. STANDARD ENGLISH AND ENGLISH FOR SPECIFIC PURPOSES

With a growing importance and the development of science and technology there is a need for specific languages which would follow the scientific and technological development. This statement is valid for all languages, including English, which is dominant in the field of science.

Current needs related to learning English demand not only understanding the literature but also understanding the professional terms required for communication while conducting various jobs. Knowing that English is a dominant foreign language in the world, also known as a *lingua franca*, i.e. "any of various languages used as common or commercial tongues among peoples of diverse speech" (www.merriam-webster.com), it is important to emphasize that besides the most commonly used standard English there is also *English for Specific or Special Purposes* (ESP), which consists of *English for Occupational Purposes* and *English for Academic Purposes* (de Chazal, 2014). English for specific purposes is mostly used as part of a specific field, and in some respects it is significantly different than the standard English language. Moreover, it has its own rules and develops its unique system with its own semantic and syntactic complexities. In order to understand English for specific purposes in writing and to be able to comprehend specific information we have to understand both our own and foreign specific language used by experts to follow the development and novelties of a specific field.
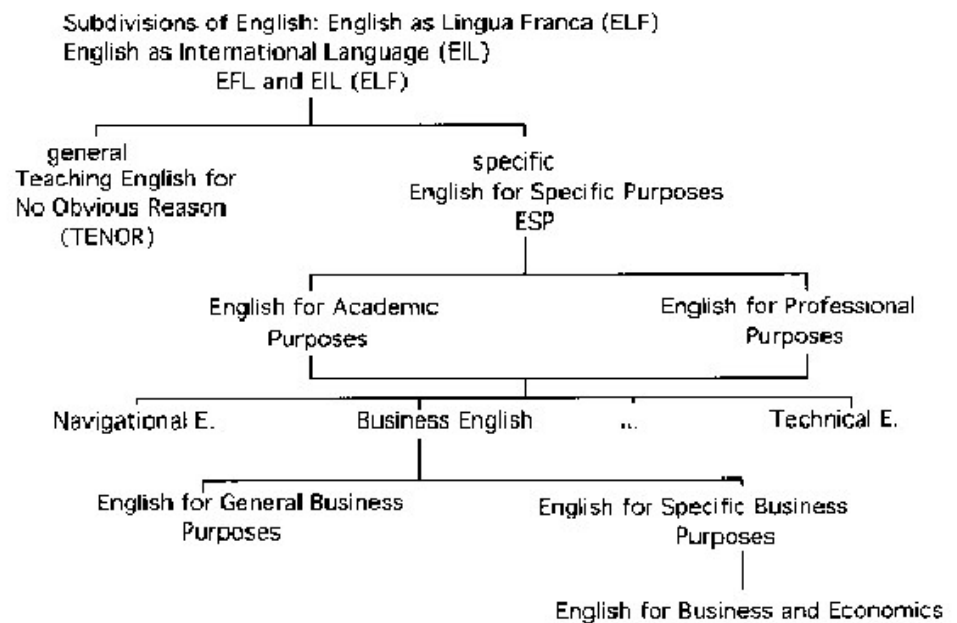
Figure 1. Subdivisions of English (source:

http://webdoc.sub.gwdg.de/edoc/ia/eese/artic97/alex/7_97.html)

2.1. Academic English

Although academic English is associated mostly with universities, and students and professors who are writing scientific articles and theses, it also covers a wide range of closely related activities. Therefore, academic English is most commonly described as the study of English language whose aim is to help students with their curricular activities and research in their respective fields.

Unlike the standard English language, which has been defined as the "English that with respect to spelling, grammar, pronunciation, and vocabulary is substantially uniform though not devoid of regional differences, that is well established by usage in the formal and informal speech and writing of the educated, and that is widely recognized as acceptable wherever English is spoken and understood" (https://www.merriam-webster.com/dictionary/Standard%20English), academic English is most commonly used to describe an object or situation, describe a process

or how something works, to explain something, or to express the relationship between ideas. It tends to be more complex than the standard English, which is why it requires a somewhat higher English language proficiency. Nevertheless, despite its complexity, good academic writers try to make their texts as clear, precise, and as simple as possible. Academic writing is something that is mainly developed as part of university study both in English and non-English speaking communities. Providing precise and unquestionable instructions on how academic texts should be written is rather a difficult task, primarily because academic subjects vary in their use of vocabulary and expressions, types of texts and their structure and organisation (Bailey, 2006; Blanpain, 2008). However, in the next chapter some of the general rules applied in academic writing will be mentioned.

3. ACADEMIC WRITING

Academic articles mostly cover topics from a specific field. Their goal is to analyse data from the most current research and to show the results in the most accurate and understandable way.

Academic writing primarily implies the writer's understanding of the text's logic and its structure, and the final product needs to be precise, semi-formal, objective and neutral. Since its main goal is to present information as accurately as possible, it needs to be supported by evidence and facts. This also requires the writer's knowledge of the appropriate use of quotations, summarising and paraphrase. Furthermore, this writing style is distinguished by its rationality, strictness and effectivity, thus differentiating it from the standard language and writing, which is more personal and uses more lively idioms and phrases (Bailey, 2006; Blanpain, 2008). It is also a type of expression that uses precise word choice and provides a clear focus on the problem being investigated in order to present complex ideas or concepts for groups of scholars working within the same scientific fields.

In order to achieve all of the above, writers tend to use academic writing style, which can be recognised by some characteristics elaborated further in this thesis, after a short overview of the academic articles used in the analysis of academic style.

3.1. The use of synonyms in academic writing

Stephen Bailey (2006) states that when writing an academic article, it is necessary to find synonyms in order to provide variety and interest for the reader. Synonyms are not always exactly the same in meaning, but when finding the right one it is important not to change the register that is being used. *Firm* is a good synonym for *company*, but *boss* is too informal to use for *manager*. Synonyms are also required when paraphrasing or notetaking to avoid plagiarism. The accuracy of a synonym often depends on the context. Both *pupil* and *student* could be used to identify a fifteen-year-old schoolgirl, but when she goes to university only *student* is normally used. *Scholar* might be a possible synonym, but it is very formal. Quite alike, at university a *lecturer* could also be called a *teacher*, but in school the only possible synonym for *teacher* is the old-fashioned *master* or *mistress*.

According to Bailey (2006, pp. 109-110), some of the most frequently used academic synonyms are:

- ➢ Nouns
  - o goal - target
  - o study - research
  - o results - findings
  - o area - field
  - o authority – source
  - o benefit - advantage
  - o category - type
  - o component - part
  - o concept - idea
  - o behaviour - conduct
  - o controversy - argument
  - o feeling - emotion
  - o beliefs - ethics
  - o expansion - increase
  - o interpretation - explanation

- issue - topic
- method - system
- option - possibility
- statistics - figures
- framework - structure
- trend - tendency
- quotation - citation
- drawback - disadvantage
- output – production

- Verbs
  - reduce – decrease
  - achieve – reach
  - alter - change
  - evaluate - examine
  - claim - suggest
  - assist - help
  - attach - join
  - challenge - question
  - clarify - explain
  - quote - cite
  - concentrate - focus
  - confine - limit
  - show - demonstrate
  - eliminate - remove
  - found - establish
  - develop - evolve
  - maintain - insist
  - predict - forecast
  - prohibit - ban
  - retain - keep
  - strengthen - reinforce
  - accelerate – speed up
  - reduce – cut

3.2. Academic articles analysed in this thesis

Academic articles selected for the purposes of this thesis regarding physical activity in preschool-aged children are:

- Motor skill performance and physical activity in preschool children (Williams, H. G., Pfeiffer, K. A., ONeill, J. R., Dowda, M., McIver, K. L., Brown, W. H. & Pate, R. R., 2008). This article discuses the correlation between motor skill performance and physical activity in preschool children. The main hypothesis, which stated that children with better developed motor skills find it easier to be physically active, was confirmed in this research. The second part of the article discuses the possible ways to enhance children's motor skills.

- Physical activity in overweight and nonoverweight preschool children (Trost, S. G., Sirard J. R., Pfeiffer, K. A. & Pate, R. R., 2003). This article presents research that was conducted with the aim to compare physical activity levels of overweight and nonoverweight children while attending preschool. A secondary aim was to evaluate weight-related differences in hypothesized parental determinants of child physical activity behaviour. The results showed that overweight boys were significantly less active than their peers. However, no significant differences were found for the parental influences on physical activity behavior.

- Fitness, activity, and sports participation in the preschool child (The Committee on Sports Medicine and Fitness, 1992). This article discusses the adequate amount of physical exercise for optimal functional capacity and health in preschool-aged children. It also provides recommendations and guidelines for achieving such goals specially emphasizing the importance of free play, promoting healthy living and physical activity and including parents as role-models for their children.

- Parental report of outdoor playtime as a measure of physical activity in preschool-aged children (Burdette, H. L., Whitaker, R. C., & Daniels S. R., 2004). This article presents research conducted in order to measure average physical activity and the amount of children's outdoor playtime, and to

evaluate if childhood obesity could be prevented by reducing indoor activity time and adding it to outdoor playtime.

- Physical activity of preschool children: A review (Crosatti Barbosa, S. & de Oliveira A. R., 2016). This article presents a study that was conducted with the aim to determine the level of physical activity of children during the period of stay in preschool, and associated factors. Authors concluded that children attending preschools spend most of the day in sedentary behaviour which should be changed. So they propose an increase in physical activities, especially the ones initiated by children.

- Physical activity for preschool children - how much and how? (Timmons, B. W., Naylor, P. J., & Pfeiffer, K. A., 1992). This article provides scientific evidence to support a link between physical activity and biological and psychosocial development during early childhood. They particularly emphasise the interaction between physical activity and motor skill acquisition, the nature of physical activity which contributes to healthy weight gain and the importance of children's environment in motivating children to participate in physical activities.

- Possibilities to applicate (sic.) some recreative sports activities in preeschool(sic.) age (Kocić, J., Tošić, S. & Aleksić, D., 2013). This article discusses the appropriate forms of physical activity in preschool-aged children and ways in which certain motion can be introduced into their exercises.

- Physical activity to prevent obesity in young children: Cluster randomised controlled trial (J. J. Reilly, L. Kelly, C. Montgomery, A. Williamson, A. Fischer, J. H. McColl, R. Lo Conte, J. Y. Paton, & S. Grant, 2006). This article presents research that was conducted with the aim to assess whether physical activity intervention reduces body mass index in young children. The results showed that even though physical activity can significantly improve motor skills in this research it did not reduce body mass index in young children.

3.3. Academic writing style guidelines

It is difficult to give specific rules for academic style which would apply to all areas in which it is used. When reading books, articles and journals in one's area of study we should note what is acceptable and what is not used as often. There will probably be some exceptions to the points below, but if we follow these general guidelines we should be able to develop a suitable style of our own and be quite proficient academic writers (Bailey, 2006).

In this paragraph we will present some useful guidelines for developing personal writing style in accordance with the rules of academic writing as proposed by Bailey (2006).

- The use of idiomatic or colloquial vocabulary is not recommended. This means that instead of *dad*, *guy* we should use standard English: *father*, *man*. Some examples of the use of standard vocabulary in the selected articles are: *children, obesity, sedentary* (Reilly et al., 2006), *period, observation, various* (Crosatti Barbosa, & de Oliveira, 2016), *adults, motion, development* (Kocić et al., 2013), *parental report, outdoor playtime, cognitive capacity* (Burdette, et al., 2004).

- Vocabulary has to be used correctly, for instance, there is a difference between *rule* and *law*, *currency* and *money*, which an academic citizen should know. As exemplified in the selected articles, it is important to know the difference between *obesity* and *overweight* (Trost et al., 2003) because *"Overweight is a condition where the person weighs more than what is considered normal for that height, age and sex, while obesity is a disease marked by excessive generalized deposition and storage of fat, with a BMI (Body mass index) of over 3."* (https://www.diffen.com/difference/Obesity_vs_Overweight).

- Academic writer is as precise as possible when dealing with facts or figures, which can be exemplified by Burdette et al.'s article (2004) where the mean

and average number were calculated and the authors stated "*the mean age*" and "*the average outdoor playtime*". They have also used the word *similar* to compare numbers, "*The correlation coefficients in this study are of similar magnitude to...*" (p. 356). It is suggested to avoid phrases such as *about a hundred* or *hundreds of years ago*. If it is necessary to estimate numbers we should use *approximately* rather than *about*.

- While writing an academic article one should pay attention to conclusions, which should use tentative language rather than absolute statements such as *education reduces crime*. Instead, writers should use cautious phrases: *may reduce crime* or *tends to reduce crime*. Some tentative word examples are *may, might, can, tends to, usually, probably, it is possible that...* Specific examples have also been found in the selected articles and are stated below. "*Physical activity in preschool-aged children* usually *occurs during free play...*" (Burdette et al., 2004), "*Our intervention* probably *provided an inadequate "dose" of physical activity...*" (Reilly et al., 2006), "*the amount of PA necessary to maintain a healthy body mass* may *be greater...*" (Timmons et al., 1992), "*Activities initiated by children* tend to *result in higher levels of physical activity*" (Crosatti Barbosa & de Oliveira, 2016).

- Bailey (2006) suggests avoiding adverbs that show personal attitudes: *luckily*, *remarkably*, *surprisingly*. After a thorough search of all of the selected articles no verbs that show authors' personal attitudes were found. This may be interpreted as a firm sign that the analysed articles are written in academic English language, at least as far as this feature is concerned.

- The same author also warns against contracting verb forms: *don't, can't, won't, shouldn't, couldn't*. He suggests to use the full form instead: *do not, cannot, will not, should not, could not*. Examples of mistakes of this kind have not been found in any of the articles, instead only full forms have been observed, e.g. "*the conclusions cannot be applied automatically*" (Timmons et al., 1992), "*children did not meet the daily recommendation*" (Crosatti

Barbosa & de Oliveira, 2016). This confirms the statement expressed in the previous guideline.

- Although academic English tends to use the passive more than standard English, it should not be overused, especially since both have their place. In the active, standard sentences, the focus is on the subject, while the passive sentences put the focus on the actions. An example of an active sentence which places the focus on the subject is found in one of the selected articles and it states *"Childhood obesity affects a significant subset of preschool children"* (The Committee on Sports Medicine and Fitness, 1992). It can be compared with a passive form of another sentence, which puts the focus on the action: *"The following results will be discussed by topic…"* (Crosatti Barbosa & de Oliveira, 2016).

- Bailey (2006) further recommends the following:

  - Avoiding the use of *like* for introducing examples. We should use *such as* or *for instance* instead. An example from the analysed articles is the sentence " *other weaknesses such as failure to include a control group"* (Reilly et al., 2006).

  - Avoiding words like *thing* and its compounds *nothing* or *something*. It would be good to use *factor*, *issue* or *topic*. An example is "*we will not discuss the* issue *of academic achievement*" (Timmons et al., 1992).

  - Replacing terms such as *lots of* with a *significant/considerable number*. For example, "*they are more likely than non obese children to experience significant short-term health problems"* (Trost et al., 2003).

  - We should avoid using *little/big*. It can be replaced with more formal words such as *small/large*. An example from the analysed articles states: "*One should take into account the fact that the* greater *accumulation of MVPA during free play of gross motor skills usually occurs during the first half of play and represents a* small *fraction of the amount of time that preschool children engage in MVPA"* (Crosatti Barbosa & de Oliveira, 2016).

  - Replacing *get* phrases such as *get better/worse* with e.g. *improve* and *deteriorate*. An example from the analysed articles: "*Rhythmic*

stereotypes may serve to improve control of specific motor patterns" (Timmons et al., 1992).

- o Expressions *good/bad* are considered too simplistic and it is proposed that they should be replaced with *positive/negative*, e.g. *the changes had several positive aspects.* An example sentence from the analysed articles: *"Theoretically, establishing appropriate PA habits in early childhood should translate into positive health consequences"* (Timmons et al., 1992), *"unable to exert a negative influence on physical activity behavior"* (Trost et al., 2003).

- Bailey (2006) further states that we should not use question forms such as "*What were the reasons for the decline in wool exports?"* Instead we should use statements: "*There were four main reasons for the decline…".* An example of the use of the correct form is "*There are several reasons why the correlations between the outdoor playtime measures and the measure of physical activity from the accelerometer may not have been higher."* (Burdette et al., 2004).

- The author suggests avoiding numbering sections of a text, except in certain reports. Conjunctions and signposting expressions should be used instead to introduce new sections *("Turning to the question of taxation")*. Examples from the analysed articles are: "Finally*, the 3 primary study variables were compared with TV viewing time"* (Burdette et al., 2004), "*In conclusion of this review study"* (Crosatti Barbosa & de Oliveira, 2016).

- When writing lists, use of *etc.* or *and so on* should be avoided and *and* should be inserted before the last item: *The forests of the twelfth century consisted of oak, ash and lime* (Bailey, 2006). An example is found in the analysed articles: "*As children age (5 years +), their play activity begins to shift to rough and tumble (Pellegrini and Smith 1998), cooperative play, formal games, competition, and group-oriented activities*" (Timmons et al., 1992).

- We should avoid using two-word verbs such as *go on* or *bring up* if there is a suitable synonym. *Continue* or *raise* can be used instead. *"The investigation continued further until participants were 5 years old, and the increase in activity with age persisted"* (Timmons et al., 1992)*, "Third, our reliance on self-report methods to measure the parental influences, in particular, height and weight, raises the possibility of social desirability and recall bias"* (Trost et al., 2003).

- In academic writing, definitions are normally used in two situations:

  o The first is in the introductions, to clarify a word or a phrase in the title. When writing introductions, it is often helpful to define a term in the title, even when it may be in common use, to demonstrate that we have thought about it and that we have a clear idea what it means in our essay (Bailey, 2006).

  o The second one is to explain a word or a phrase which may be either very technical, very recent, or with no widely agreed meaning, e.g., *"For the seasonal analysis, spring was defined as the months of March, April, and May"* (Burdette et al., 2004), *"Body Mass Index (BMI) was calculated as body mass in kilograms divided by height in meters squared."* (Trost et al., 2003). *"Burdette and Whitaker (2005) defined play as 'the spontaneous activity in which children engage to amuse and to occupy themselves' (p. 46)"* (Timmons et al., 1992).

3.4. Abbreviations in academic writing

Abbreviations are a shortened form of a word or a phrase. They are an important and expanding feature of modern English language. They can be used for convenience, and familiarity with abbreviations makes both academic reading and writing easier. Three main types can be found: shortened words, acronyms and other abbreviations (Bailey, 2006).

Shortened words are often used without the writer being aware of the original form. *Bus* comes from *omnibus*, which is almost never used in modern English, but *refrigerator* is still better and more acceptable in written English than the informal *fridge*. *Public house* is now very formal while *pub* is also acceptable, but *television* should always be used instead of the idiomatic *telly* (Bailey, 2006).

An acronym is a word or name formed as an abbreviation from the initial components in a phrase or a word. They are read as words. The more official acronyms are written in capitals (NATO), while others use lower case (*lol*). NATO stands for *North Atlantic Treaty Organisation*, which is a real body, while *lol* stands for *laughing out loud*, which is a concept (Bailey, 2006). Examples from the analysed articles are: "*Data from the 1999 US National Health and Nutrition Examination Survey (NHANES)*" (Trost et al., 2003), "*Children's Activity Rating Scale (CARS)*" (Trost et al., 2003), "*OSRAC-P (Observational System for Recording Physical Activity in Children-Preschool)*" (Crosatti Barbosa & de Oliveira, 2016).

Other abbreviations are read as sets of individual letters but they can be read as a single phrase or a word in a free speech. They include names of countries, organisations, devices and companies (*USA/BBC/IBM*), and also abbreviations which are only found in written English (*PTO = please turn over/ Rd = Road*). It is useful to note that in many cases such abbreviations are widely used without most users knowing the meaning of the individual letters (e.g. *DNA/CD/LASER*) (Bailey, 2006). Examples from the analysed articles are "*moderate-to-vigorous physical activity (MVPA)*" (Williams et al., 2008), "*level of physical activity (LPA)*" (Crosatti Barbosa & de Oliveira, 2016), "*body mass index (BMI)*" (Trost et al., 2003).

3.5. Adverbs in academic writing

"An adverb a word that describes or gives more information about a verb, adjective, adverb, or phrase" (https://dictionary.cambridge.org/dictionary/english/adverb). They are used in academic texts in a variety of ways, such as to provide more detail, at the beginning of sentences and to introduce new points, with verbs and adjectives, or individually. Adverbs can be used to express time (*recently, increasingly, originally, presently, currently, traditionally*), degree (*considerably, substantially),* place (*around, everywhere, in*), frequency (*always, usually, normally, seldom, never*), manner (*medically complicated, remotely located)*, and to relate ideas (*clearly, obviously, (not) surprisingly, alternatively, similarly, (more) importantly*). They can also be used to describe changes in the rate of something, which can be small (*gradually, slightly, marginally, slowly*), medium (*substantially, significantly, steadily, considerably*) and large (*quickly, sharply, dramatically, rapidly*) (Bailey, 2006). Examples found in the analysed articles: "*The amount and nature of PA varies considerably among the studies included in this review, with no consistent operational definition*" (Timmons et al., 1992), "*Indeed, an expert panel organized by the Centers for Disease Control and Prevention recently recommended that the relation between physical activity and obesity in preschool children be better characterized*" (Trost et al., 2003), "*Physical activity as measured by the accelerometer was significantly correlated to the time spent playing outdoor*" (Burdette et al., 2004).

3.6. Articles in academic writing

Articles are words that define a noun as specific or unspecific. Consider the following examples (www.grammarly.com). The articles in English grammar are *the* and *a/an*. Unless they are uncountable (*love, money, fear*), all nouns need an article when used in the singular. The rules for using *the* (the definite article) are quite complex, but here are some general examples of using *the* accompanied with examples from the articles:

- superlatives (*the most famous, biggest, richest*), e.g. "*The greatest amount of evidence*" (Timmons et al., 2007);

- time periods (*the eighteenth century, 1980s, second millennia*), e.g. "*in the period 2000-2008*" (Crosatti Barbosa, & de Oliveira, 2016), "*In the 1970s*" (Williams et al., 2008);

- specified things (*the knowledge of most employees*), e.g. "*The intervention had nursery and home based elements*" (Reilley et al., 2006);

- regions and rivers (*the south/River Trent/Dalmatia/Slavonia*), e.g. "*the Columbia, SC metropolitan area*" (Trost et al., 2003);

- very well-known people and things (*the English novelist*), e.g. "*the Manufacturing Technologies Inc. (MTI) (formerly CSA) 7164 uniaxial accelerometer*" (Trost et al., 2003);

- institutions and bodies (*the World Health Organization/ North Atlantic Treaty Organisation*), e.g. "*The study was approved by the University of South Carolina Institutional Review Board*" (Trost et al., 2003), "*The Institutional Review Board at Cincinnati Children's Hospital Medical Center*" (Burdette et al., 2004);

- positions (*the middle, bottom, top*) (Bailey, 2006), e.g. "*the primary*"(Reilley et al., 2006).

The definite article *the* is not used in the following situations:

- names of countries (except for *the UK, the USA, the UAE* and a few others), e.g. "*Children in Scotland*" (Reilley et al., 2006)

- abstract nouns (*poverty*), e.g. "*sociodemographic information*" (Trost et al., 2003);

- companies/bodies named after people/places (*Sainsbury's, Sheffield University, University of Zagreb*) (Bailey, 2006), e.g. "*Public Health Agency of Canada*" (Timmons et al., 2007).

In English, the two indefinite articles are *a* and *an*. Beneath are listed some rules for using indefinite articles accompanied with the examples from the analysed articles.

- Like other articles, indefinite articles are invariable. You use one or the other, depending on the first letter of the word following the article, for pronunciation reasons. E.g. "*No day was included for an assessment unless there were 8 or more waking hours of monitoring*" (Burdette et al., 2004), "*Time spent playing outdoors is a potential surrogate measure of physical activity in preschoolers*" (Burdette et al., 2004).

- The indefinite article is used to refer to something for the first time or to refer to a particular member of a group or class. E.g. "*In the context of a global childhood obesity epidemic*" (Timmons et al., 2007).

- The indefinite articles should be used with names of jobs. E.g. "*If either a parent completes the physical activity questionnaire or the child completes it*" (Burdette et al., 2004).

- They should also be used with nationalities and religions in the singular. E.g. "*It is also important to consider international reports in a Canadian context*" (Timmons et al., 2007).

- The indefinite articles should be used to refer to an example of something. E.g. "*This small lightweight device ... was worn around the child's waist like a beeper*" (Burdette et al., 2004).

- Finally, the indefinite articles are used to mean 'one', referring to a single object or person, or a single unit of measure. E.g. *"Another investigation found a significant correlation between PA and the amount of time parents spent exercising"* (Timmons et al., 2007)

3.7. Conjunctions in academic writing

Conjunctions are words and phrases such as *and* or *but* which join parts of a sentence together. There are six main types of conjunctions (Bailey, 2006) and they have all been exemplified with quotes from the selected articles:

- addition (*also, besides, furthermore, likewise, moreover, not only...but also*), e.g. *"Regular PA during childhood is not only important in maintaining a healthy body mass, but also brings a plethora of other physiological and psychosocial benefits"* (Timmons et al., 1992).

- result (*therefore, consequently, as a result*), e.g. *"Consequently, experts in Canada and the United States have developed PA guidelines for youth"* (Timmons et al., 1992).

- reason (*because, since, so that, in order (that), why*), e.g. *"Our results add considerably to the evidence base on prevention of childhood obesity because of the paucity of research in children"* (Reilly et al., 2006).

- time (*after, as long as, as soon as, before, by the time, now that, once, since, till, until, when, whenever, while*), e.g. *"These guidelines have focused on school-aged children and adolescents; until recently little attention has been paid to the needs of younger children"* (Timmons et al., 1992).

- example (*for instance, for example, such as*), e.g. *"Direct measures to assess physical activity, such as observation and accelerometers, are often not feasible in large epidemiologic studies"* (Burdette et al., 2004), *"For example, there is no proof that special training can groom a pre-schooler to become a future champion"* (The Committee on Sports Medicine and Fitness, 1992).

- opposition (*than, rather than, whether, as much as, whereas*, e.g. *"It is this lack of maturity rather than poor motor coordination that limits a child's ability to perform certain tasks"* (The Committee on Sports Medicine and Fitness, 1992).

3.8. Verb tenses in academic writing

Most frequently used verb tenses in academic writing are (Blanpain, 2006)listed further in the text.

- Past simple tense is used when the author wants to emphasize that the research was conducted and that it is completed, e.g. *"In 2002 we invited 124 nurseries to participate in the movement and activity..."* (Reilly et al., 2006), *"For the present study, the physical activity variables of interest were the mean activity rating"* (Trost et al., 2003).

- Present perfect tense is used to generalise and emphasize that the thesis is relevant in the present time, e.g. *"Previous studies involving preschool-aged children have shown physical activity to be protective of accelerated weight gain and inversely associated with change in body fatness.* (Trost et al., 2003), *"Consequently, experts in Canada and the United States have developed PA guidelines for youth, and governments and associations have delivered these recommendations for several years* (Timmons et al., 1992).

- Present simple tense is mostly used when mentioning theses which are analysed in a more detailed way, or when stating general facts which are not affected by time, e.g. *"Keeping young children physically active is an important strategy to promote their*

health and wellbeing." (Burdette et al., 2004), *"The adults have a choice of the way they will work with children"* (Kocić et al., 2013).

- Future simple is used to describe an action that is expected to occur in the future or for prediction, e.g. *"A validated surrogate measure of preschoolers' physical activity, such as parent report of outdoor time, will assist future research efforts"* (Burdette et al., 2004), *"PA experiences for preschool children will be enhanced by adult facilitation"* (Timmons et al., 1992).

4. ACADEMIC ARTICLES

While writing an academic article there is a recommended, and in most articles, a clearly visible structure. Therefore, we can see that this type of articles usually begins with introductory considerations that are an important part of an academic article in which the previous research of the discussed topic is analysed. The main purpose of careful literature review is to become familiar with the previous research on the same topic and to be able to paraphrase or quote other authors thus avoiding plagiarism. While writing academic articles we have to make sure that we list the references in a clear and systematic way. All the quotes should be clearly visible and visually distinctive. We cannot copy the text from other authors' articles and list it as our own. It is important to mention that we can replace the author's name with a personal pronoun, but only if we have mentioned his/her name in a previous sentence.

Chronological numbering is not the best approach when presenting previous research. It is preferable to structure an approach to the topic and through it emphasize the connection to the previous research, their advantages and disadvantages.

The introduction should not be too long. It has to be clear and concise in order to develop the reader's interest. In the elaboration we can usually find the research report which generally describes the research methodology. After the methodology follows the presentation of the research results and the discussion where the results are compared with those of the previous similar studies. The conclusion should state final thoughts, including the review of the main ideas given throughout the article.

At the end of the article the author states the sources which have been referred to throughout the article and which can be:

books, book chapters, newspaper, magazines, electronic sources (internet sites or data bases), movies, television programmes, and personal communication (e-mail, interviews and letters).

It is important to state detailed information for each of the referred sources. When we list books as a reference we state the author, the year it was published, name of the book, the publisher and the city in which it was published. In some fields the references are stated in the footnotes (Baily, 2006; Blanpain, 2006; Jordan, 2003).

When referring to a source in the beginning of a chapter we should use a reference verb.

> *"These verbs can be either in the present or the past tense. Normally the use of the present tense suggests that the source is recent and still valid, while the past indicates that the source is older and may be out-of-date, but there are no hard-and-fast distinctions. In some disciplines an old source may still have validity"* (Bailey, 2006, p. 64).

An example from the analysed articles: *"Malina (1991) has proposed that in preschool-age children general movement activities develop specific movement patterns and skills; these in turn provide the basis for acquisition of future complex skills where greater emphasis can be placed on the health, fitness, and behavioral components of physical activities"* (Timmons et al., 2007).

There are various systems of referencing in the use in the academic world, so we should ask our teachers, mentors or supervisors if we are not sure which to use. With any system, the most important point is to be consistent. In this thesis we have used the APA (American Psychological Association) referencing system.

The APA (American Psychological Association) style requires two elements:

- In-text citations which include information about a source within the text of the assignment:

    o the name of the author or authors
    o the year of publication
    o the page number (if we use direct quote).

- A reference list at the end of the text is a single list of all the sources of information we have cited in our assignment. Each listed item requires specific bibliographic information. For instance, in the case of a book we should list: the author/editor, year of publication, title, edition, place of publication and publisher, as found in the title pages. Example of a reference from this thesis:

    "Bailey, S. (2006). *Academic Writing: A Handbook for International Students (Second edition)*. London and New York: Routledge".

    We should list each item in alphabetical order by author surname. Titles should be in italics. All of the references included in the list must also be cited in the text (https://www.usq.edu.au/library/referencing/apa-referencing-guide).

Academic articles can be found in both online data bases and printed magazine specialised for a specific field. These articles are mostly written by experts in their respective fields of study, which makes academic articles an especially valuable source of information.

The content of academic articles is quite different than the content of popular articles because they cover new research, relevant discoveries, analyses and other information important to academic readers.

Magazines can be divided into three categories:

- *Magazines* with practical advice and information for a wide audience. These magazines transfer important and relevant information in a way that is simple and understandable to general public.
- *Professional* journals that contain more specific information of which some can be useful to a wide audience but they are written mostly for professional needs.
- *Scholarly journals* which are written in a strictly academic style and contain the results of scientific research. They contain some words and expressions which could be difficult to understand or even unknown to a person who is not an expert in that field of study. The articles analysed in this thesis belong to this category.

4.1. Analysis of the visual and content characteristics of academic articles discussing physical activity in preschool-aged children

In this paragraph we will describe visual and content characteristics of one of the analysed articles regarding physical activity in preschool-aged children. We will be describing the article "*Physical activity for preschool children – how much and how?*" written by Timmons et al. (1992).

In the introduction the authors state the concern for the growing percentage of obese children even in the preschool age and state that the previous attempts to formulate physical activity guidelines have not been as successful as expected. In the elaboration the authors write about their own methodology and give physical activity advice for children. After that they give an overview of physical activity as play, they discuss why and how it would be useful in the prevention of obesity in children. Then they analyse current activity among children, they state some evidence on positive effects of physical activity on physical and psycho-social health as well as cognitive functioning. In the conclusion they repeat the main reasons to promote physical activity among children and state that further research is required to

understand a growing percentage of obese children and find a way to stop obesity epidemic. At the very end of the article there is a list of references.

The article is quite long, it consists of a front page followed by 13 pages of text. It is written in academic language with a lot of professional vocabulary. The article is well structured and it fulfils all the guidelines for a well written academic article. The front page is quite simplistic, it contains the title of the journal in which the article is published, the title of the article and a short text with the most important information about the journal. On the first page we can find the title of the article, list of the authors, the abstract written in both English and French and the introduction. Throughout the pages we can find several tables containing some statistical information. The article has no photographs or pictures, and the pages are split into two columns of text.

5. VOCABULARY ANALYSIS OF THE SPECIFIC TERMS FOUND IN ARTICLES CONSIDERING PHYSICAL ACTIVITY IN PRESCHOOL-AGED CHILDREN

Selected academic articles talk about the importance of physical activity for preschool-aged children. The topic is very interesting because of the growing percentage of obese children in the world. These articles offer not only the main problems and statistics but also various solutions to those problems. All articles are written in academic language and they are characterised by objectiveness, clarity, formality and specific vocabulary.

In the following examples we will analyse some terms specific to physical activity in preschool-aged children.

Firstly we will analyse collocations found in the articles. Collocations refer to a particular combination of words (www.merriam-webster.com/dictionary /collocation). There are several types of collocations and they are divided by the parts of speech they are made of: adverb + adjective, adjective + noun, noun + noun

+ verb, verb + noun, verb + adverb (Bilić-Štefan, 2014). After analysing the articles we have concluded that the form of collocation made of adjective + noun is the one used most often. We will list some collocations according to their semantic features.

There are many collocations describing movement:

- o aerobic activity
- o aerobic dance
- o cooperative play
- o exercise play
- o fast running
- o free play
- o interactive play
- o locomotor movement
- o moderate walking
- o organised sports
- o outdoor play
- o perceptual-motor training
- o physical activity
- o repetitive practice
- o sedentary lifestyle
- o special training
- o structured activity
- o structured exercise
- o unstructured activity
- o vigorous activity

Every one of these terms describes a form of movement, intensity of movement or physical movement in general. All of these terms are specific to the articles analysed in this thesis which describe the rules and needs of physical activity among preschool-aged children.

Next are the collocations which refer to biological rules and human skills:

- behavioural choices
- biological development
- body mass index
- cognitive development
- environmental constraints
- environmental restrictions
- motor development
- motor skill
- physical activity capabilities
- social development
- specific skills

These terms refer to human development, basic human skills and general terms connected to it. Some of these terms can be found in every one of the analysed articles and we can conclude that they are specifically connected to this topic.

Other specific terms in the analysed articles are:

- active lifestyle
- conventional training methods
- epidemiologic studies
- global childhood obesity epidemic
- parental physical activity report
- physical activity needs
- spatial information
- sufficient physical activity

Besides a number of collocations, we have found several compounds which are used in these articles quite often. A compound is a word made by combining two or more words (https://www.merriam-webster.com/dictionary/compound). Some of the compounds that are found quite often in the analysed articles are:

- childhood
- childcare
- gender-specific
- food-related

- overweight
- underpowered

6. ENGLISH-CROATIAN GLOSSARY OF TERMS SPECIFIC TO ACADEMIC ARTICLES REGARDING PHYSICAL ACTIVITY IN PRESCHOOL-AGED CHILDREN

At the end of this thesis an English-Croatian glossary of some of the terms specific to the analysed articles will be presented. Some of the terms may be familiar or specific to more than one field, but we will mention them for the sole purpose of them being used rather often in the analysed articles. We will state the term in English and provide a Croatian translation of the term.

- *Accelerometer – mjerač ubrzanja*
- *active lifestyle – aktivan stil života*
- *adiposity - debljina*
- *aerobic activity – aerobna aktivnost*
- *aerobic dance – aerobni ples*
- *behavioural choices – odabir oblika ponašanja*
- *biological development - biološki razvoj*
- *Body Mass Index – Indeks tjelesne mase*
- *child development – razvoj djeteta*
- *childcare – briga o djeci*
- *childhood - djetinjstvo*
- *cognitive development – spoznajni razvoj*
- *compensatory movement – kompenzacijska kretnja*
- *conventional training methods – konvencionalne metode vježbe*
- *cooperative play – suradnička igra*
- *early childhood – rano djetinjstvo*

- *emotional development – emocionalni razvoj*
- *environmental constraints/ restrictions – okolinska ograničenja*
- *epidemiologic studies – epidemološke studije*
- *exercise play – vježbovna igra*
- *exercise programme – program vježbanja*
- *fast running – brzo trčanje*
- *food-related – vezano uz hranu*
- *free play – slobodna igra*
- *gender-specific – rodno specifični*
- *global childhood obesity epidemic – globalna epidemija pretilosti u djece*
- *gross locomotor movement – krupne motoričke kretnje*
- *healthy weight gain – zdravi dobitak težine*
- *interactive play – interaktivna igra*
- *locomotor movement – lokomotorna kretnja*
- *moderate walking – umjereno hodanje*
- *motor development – razvoj motorike*
- *motor play – motorička igra*
- *motor skill – motorička vještina*
- *natural movement – prirodne kretnje*
- *nursery - jaslice*
- *obesity - pretilost*
- *organised sports – organizirani sportovi (sportovi sa strogo definiranim pravilima)*
- *outdoor play – igra na otvorenom*
- *outdoor recreation area – prostor za rekreaciju na otvorenom*
- *overweight – prekomjerna tjelesna težina*
- *parental physical activity report – roditeljski izvještaj o tjelesnoj aktivnosti*
- *passive movement – pasivne kretnje*
- *perceptual-motor training – trening za razvoj percepcije i motoričkih vještina*
- *physical activity – tjelesna aktivnost*
- *physical activity capabilities – sposobnost sudjelovanja u tjelesnoj aktivnosti*
- *physical activity needs – potrebe za tjelesnim aktivnostima*
- *physical competence – fizička sposobnost*

- *physical development – fizički razvoj*
- *physical education – tjelesna i zdravstvena kultura*
- *physical health – fizičko zdravlje*
- *physical play – fizička igra*
- *playtime – vrijeme za igru*
- *psychosocial factors – psihosocijalni faktori*
- *repetitive training – kružni trening*
- *rough play – gruba igra*
- *sedentary lifestyle – sjedilački način života*
- *self-concept – samosvijest*
- *self-efficacy - samoučinkovitost*
- *self-esteem - samopouzdanje*
- *social development – društveni razvoj*
- *spatial information – prostorne informacije*
- *special training – posebni trening*
- *specific skills – posebne vještine*
- *structured activity – strukturirane aktivnosti*
- *structured exercise – strukturirano vježbanje*
- *sufficient physical activity – zadovoljavajuća razina tjelesne aktivnosti*
- *toddler – dijete koje je tek prohodalo*
- *training methods – metode treninga*
- *underpowered – nedostatak energije (stanje u kojem razina energije ne zadovoljava potrebe potrošaća)*
- *unhealthy weight gain – nezdravi dobitak težine*
- *unstructured activity – slobodna (nestrukturirana) aktivnost*
- *vigorous activity – snažna/energična aktivnost*
- *workout – tjelovježba*

7. CONCLUSION

Academic articles present current topics and problems of a specific field of study. They provide information about the most recent studies and research as well as their analyses. In this thesis we have focused on the academic articles from the field of child care and education as well as the field of kinesiology. After analysing the selected articles belonging to the previously mentioned fields we draw a conclusion that a person who uses these articles for their professional growth and acquiring new knowledge needs to be familiar not only with general English language but also with academic English language as well as the vocabulary knowledge of the terms specific to the fields of child care and education and kinesiology. Although these skills are required to fully understand and comprehend these articles, we propose that every person with an average knowledge of English language could mainly understand and draw some useful information from most of the articles.

Academic articles are written in the academic English language, they follow the rules and guidelines of academic writing and use a formal and neutral writing style. The analysed articles are obviously intended for professional use, that is recognisable through its specific terms and vocabulary, and they also use specific terms and vocabulary in order to provide readers with as precise and correct information as possible. After analysing the vocabulary and terms specific to the fields of child care and education and kinesiology we come to a conclusion that the analysed terms can be partly understood by an average reader but in order to understand it entirely we would have to be experts in that field. The articles are permeated with collocations, compounds, exemplifications and various conjunctions.

All of the articles are structured in accordance to the rules of academic writing as well as writing in general. They consist of an introduction, elaboration and conclusion which are written in a cohesive and logical way. The analysed articles are written in the most professional manner and in no way deviate from the required standards. At the end of the elaboration a short English-Croatian glossary has been provided containing some specific terms and words in order to help understand the articles in the best possible way.

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ŽIVOTOPIS

Ivan Anđal rođen je 21. veljače 1995. u Zagrebu. U osnovnoj školi trenirao je košarku i učio engleski jezik u Školi stranih jezika Arcus. Nakon osnovne škole, upisao je Srednju školu Dugo Selo (smjer opća gimnazija). Osim engleskoga jezika, u srednjoj školi učio je njemački jezik u sklopu obvezne nastave i nastavio se aktivno baviti košarkom.

Budući da pokazuje zanimanje za dječji razvoj, odgoj i obrazovanje, upisuje Učiteljski fakultet u Petrinji, smjer Rani i predškolski odgoj i obrazovanje na kojemu završava preddiplomski studij. Nakon preddiplomskoga namjerava upisati i diplomski studij Ranoga i predškolskoga odgoja i obrazovanja. Aktivno se služi engleskim i njemačkim jezikom u govoru i pismu. Posjeduje zavidno poznavanje informatičkih vještina uključujući rad na računalu te tehnički rad na istom. Pouzdan je, komunikativan, voli raditi u timu i posjeduje vještine vođe istog. Uvijek je spreman pomoći, predan radu te motiviran za stjecanje novih znanja, koja želi usvojiti u daljnjem obrazovanju.

Izjava o samostalnoj izradi rada

Pod punom odgovornošću izjavljujem da sam završni rad pod naslovom „Physical activity in preschool-aged children – vocabulary analysis of articles written in English language" u potpunosti izradio samostalno. Pri izradi koristio sam literaturu koju sam u skladu s pravilima i naveo.