Guideline to writing a successful thesis in sport psychology

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Introduction

At the end of the course of study of sport science at the Westfälische Wilhelms-Universität Münster, the students have to prepare a bachelor's thesis for their bachelor studies, or a master's thesis respectively. Those theses can be prepared as mere literature research or empirical study. However, the department of sport psychology (direction: Prof. Dr. Bernd Strauss) will only supervise empirical theses. Only in backed-up exceptions with case-by-case decisions, literature theses can be allowed. The tasks necessary to fulfil for all students prior to writing the thesis will be outlined in *Chapter 1*.

Empirical work is characterised by one or more research questions/hypotheses that are answered based on an individual experimental plan and the acquisition of data. The hypotheses are derived from current theoretical findings. An important part of any thesis is to present those findings. The structure of the empirical thesis is explained extensively in *Chapter 2.*

Scientific writing differs greatly from daily writing. It is based on already published articles or books; the authors are thus obliged to comply to pre-defined criteria. The department of sport psychology uses the criteria known as the APA-style by the American Psychological Association. An excerpt of the APA-style and additional indications concerning the formal and contentual design are presented in *Chapter 3*.

The assessment of the scientific thesis in the field of sport psychology follows a fundamental scheme based on universal, consistent guidelines of sport science, psychology and related branches of science as demonstrated in *Chapter 4*.

The final *Chapter 5* presents literature recommendations that cover specific topics that should be used as additional material for writing the scientific thesis.

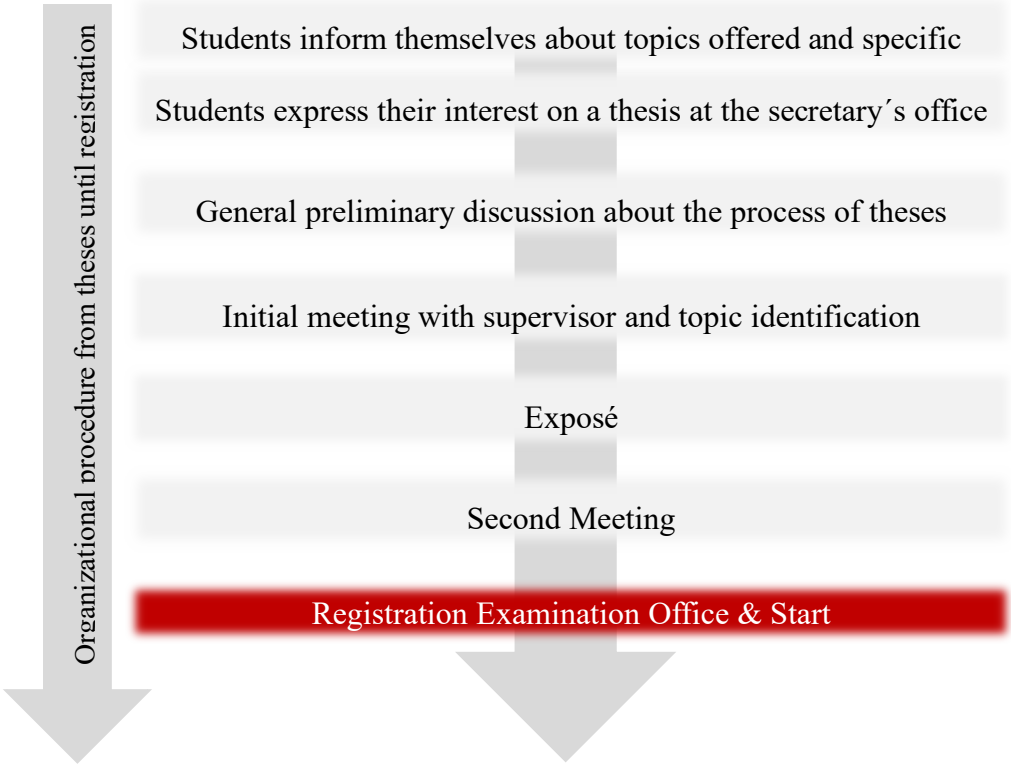
This guideline aims to assist students in their writing of a scientific paper. In the following, some aspects of the formal design will be described, leaning on the current criteria by the APA. It is noted that the guidelines at hand are addressed mainly to students graduating in the department of sport psychology. Other work units of the institute for sport science of the WWU Münster might have individual requirements.

1 From finding a topic until the application

The main aim of the thesis is to show that the student is capable of working scientifically, not about the empirical findings of the study. Within the framework of the master thesis the process of gaining scientific insights and expanding on the state of the art is added.

Finding topics is a time-consuming, but also rewarding process. Based on the research projects of the employees, certain topics can be suggested, in individual cases the employees also offer "ready-made" topics. These are either presented on the homepage or can be asked for in conversation. The decision for a topic should ultimately be made by the students themselves; after all, personal interest makes it easier to work on individual topics.

The graphic describes the procedure from finding a topic until the application of the thesis.



The first decision relates to the scientific field in which the thesis will be conducted. An overview of the current research topics or focuses of the department can be found online (team of the sport psychology department or final theses). All employees of the department of sport psychology may be either first or second examiner. When writing a master thesis the first supervisor has to be in possession of a doctoral degree.

After finding an interesting field of research, students inform the secretary of the department of sport psychology via mail about their interest of a specific field. Then follows a mandatory, general preliminary discussion about the processes of theses. Afterwards the project should be discussed with the supervisor (*initial interview*). Subsequently, an *exposé* of maximally five pages is prepared in consultation with both supervisors. It includes an introduction into the

topic, a theoretical foundation, the exact hypothesis and the proposed research method. A provisional table of content and eight to ten references are added. The exact phrasing of the topic can be formulated during a consultation hour (*second interview*). Moreover, the contentual structure and research methods are discussed, feedback on the proposed hypotheses formulated in the exposé is given and advice is provided in statistically difficult cases, e.g., choosing the correct method of analysis and identification of relevant operationalisations.

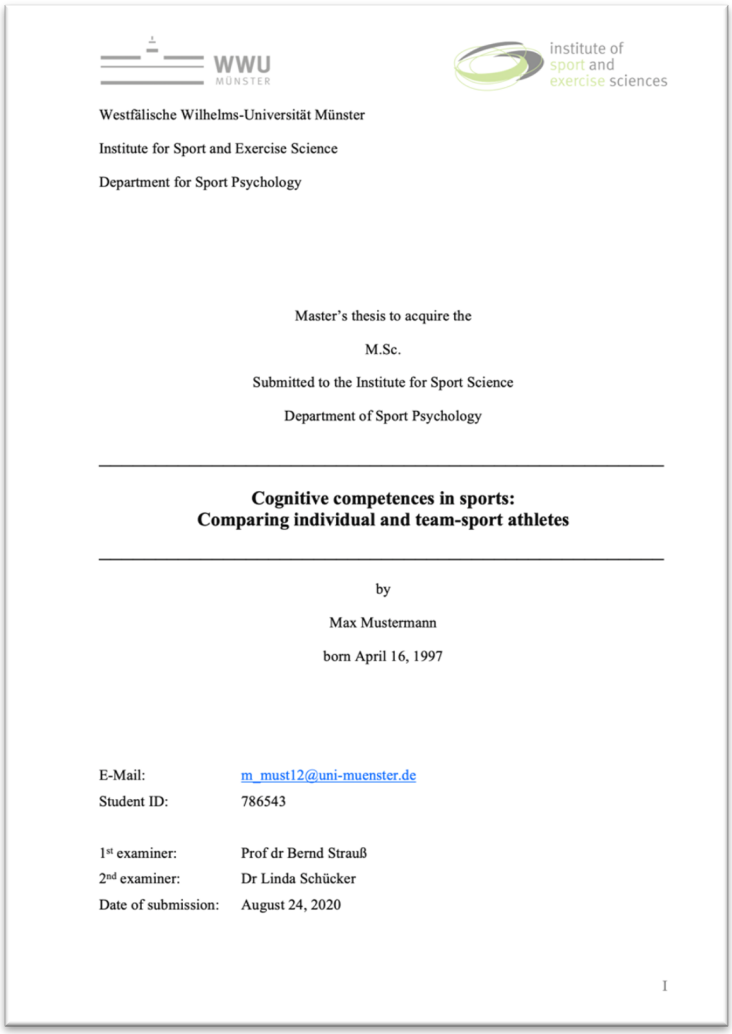
The last, most important requirement for a successful thesis includes the formal registration at the examination office I. This can be done after the initial interview. Information on how to apply can be found on the website of the university (examination office 1). In addition, students must also pre-register on aspredicted.org to contribute to Open Science by answering some questions about the proposed study.

2 Structure of a scientific thesis

The general structure of scientific work is stated in binding form (Field, 2013; APA, 2009). It includes a cover page, a content list, the main text (described in more detail in *Chapter 4*), the different registers, the appendix and the declaration on oath. In the following, these areas will be elaborated on.

The scientific thesis starts with a cover page that clearly displays the main information, including the name of the university, the title and type of thesis (bachelor's or master's thesis), name, date of birth and the address of the author, both examiners and the filing date.

Example of a cover page:



Westfälische Wilhelms-Universität Münster

Institute for Sport and Exercise Science

Department for Sport Psychology

Master's thesis to acquire the

M.Sc.

Submitted to the Institute for Sport Science

Department of Sport Psychology

Cognitive competences in sports:
Comparing individual and team-sport athletes

by

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2nd examiner: Dr Linda Schücker
Date of submission: August 24, 2020

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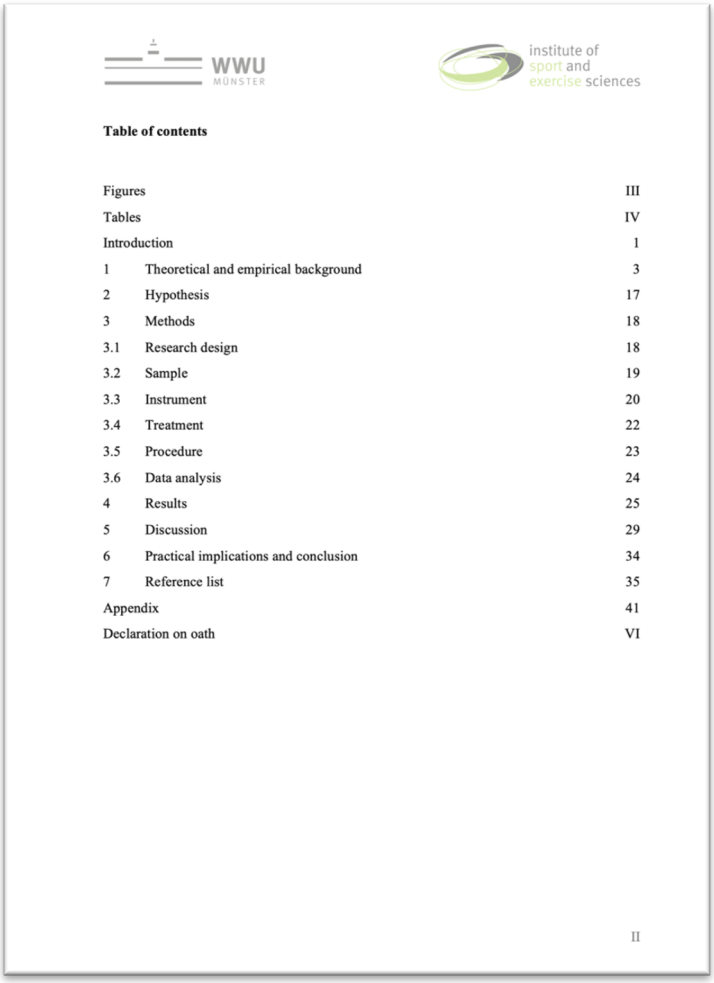
Some notes on the cover page:

- All main information must be stated on the cover page.
- A reasonable and lean structure is advisable concerning both the cover page and the whole thesis. Visual appearance and legibility are a crucial evaluation point.
- Changes are possible, as long as they are not to the expense of a structured appearance.

The cover page is followed by the structuring of the whole thesis, or a tabular content list. This includes all chapter- and paragraph headings as well as all page numbers. The figure and table register can be added on the next pages. Those serve as a clear summary of figure and table captions with the analogous page numbers that are given as Roman numerals. This indicates that those paragraphs do not belong to the contentual part of the thesis. All other page numbers are labelled as Arabic numerals. The reference list completes the thesis (more detailed in *Chapter 3.3.4*).

Example of a content list:



WWU MÜNSTER

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Some notes on the content list:

- The structure of the thesis gives a clear overview and should not be too differentiated.
- It is only useful to subdivide chapters when there are more than two paragraphs (Field, 2013). The single paragraphs should take a minimum of half an A4 format, or the content has to be included into the text segment before.
- The number of subsections of one chapter should not exceed three, max. four (i.e.: “1.1.2.3 Heading”; not: “1.1.2.3.1 Heading”).

- The subsections are labelled by decimals (Field, 2013). There is no full stop set after the last number (also after chapter headings; APA, 2009).
- Furthermore, there should be an appropriate ratio of the single chapters and paragraphs in relation to the overall scope of the thesis.
- Microsoft Word and other writing software offer the option to automatically create registers. It is important that the chapter- and paragraph headings are formatted identically (use style sheets).
- During the whole process of writing the thesis the legibility of the text is crucial. It is thus recommended to choose concise headings (acronym, sentence or question).

The **appendix** should include such information that were not listed in the main text due to legibility, but are still relevant for the thesis (e.g. questionnaires). Instead of page numbers, "Appendix A", "Appendix B", etc. and a heading are used as labels (Field, 2013). The layout of the appendix conforms to the original format of the used documents. It is *not* adjusted to the formatting of the thesis. All data is burned to a CD or DVD and submitted attached to the thesis.

The scientific work is the intellectual property of the author. Therefore, a declaration on oath has to be added to the thesis to certify, to the best of their knowledge, that the thesis was written independently and that only the listed literature was used. Additionally, it is declared that all citations (literal or analogous) are labelled correctly. A violation of this declaration equals plagiarism and possibly results in cancellation of enrolment in conjunction with a criminal charge.

Example for a declaration on oath:

Hereby, I, Max Mustermann, born 16.04.1997 in Berlin, declare that I have developed and written the enclosed thesis

"Cognitive competences in sports:
Comparing individual and team-sport athletes"

completely by myself and that I have not used sources or means without declaration in the text. Any thoughts from others or literal quotations are clearly marked. The thesis was not used in the same or in a similar version to achieve an academic grading or is being published elsewhere.

Münster, August 18, 2020 Max Mustermann

Place, Date Signature

A Bachelor thesis should have 60 pages (excluding registers and appendix) and a master thesis should comprise 80 to 100 pages (excluding registers and appendix).

3 Formal components

In the following, adding to *Chapter 2*, more information on the appearance (*Chapter 3.1*) and content (*Chapter 3.2*) is given. These notes are based on the APA standard (APA, 2009). Moreover, this guideline presents suggestions for better reading comprehension. Key factors for a successful evaluation of the thesis are content, language, grammar and layout.

At this stage it is pointed out that the requirements that are not described in the following, can be freely designed. However, students should still attend to the readability and comprehensibility of the text.

3.1 Design

The outer design that is described in this part, refers to the layout of each page, the editing of page numbers, some features of the language settings, the font as well as the use of abbreviations and footnotes. Possible ways of altering those settings in the PC software Microsoft Word 2016 are described in brackets and in italic. These instructions can be transferred to different writing software.

Some notes on the page layout (tab *Page Layout*):

- A4-format upright (*size, alignment*)
- Page margins (*Margins*):

Top = 3 cm	Left = 3 cm
Bottom = 3 cm	Right = 2 cm

Some notes on the page numbers (tab *Insert*):

- Top right (*top of page* = 1.5 cm) or bottom right (*bottom of page* = 1cm)
- First page of introduction = page 1
- Boxes first page different and deactivate even/odd page de-activated (*double klick on page number*)

Some notes on the language:

- English (tab *Review*)
- Hyphenation: *automatic* (tab *page layout*)
- Grammar and spelling according to current dictionaries
- In specific parts of the thesis verbs are formulated in present tense. The results of previous experiments are still valid today, so there is no need for past tense (except for results of experiments that have been refuted).

Some notes on the writing: (tab Home) – a suggestion, no requirement

- *Font:* Arial or Times New Roman
- *Font size* = 12 Pt.
- *Justified text*
- *Indentation* (*Right* and *Left*) = 0 cm (for *First line and hanging*)
- *Paragraph spacing*: *Before* = 6 Pt. and *After* = 6 Pt.
- *Line spacing*: 16 Pt.
- Headings should be visually separated from the rest of the text (*font size* higher and eventually *Text formatting* bold; higher *Spacing after*)
- For text, headings etc. consistent symbols and font sizes must be used.

Tipp for writing:	Before starting to write your thesis, all layout templates should be created in a raw file. From there, the thesis can be written.

Some notes on the abbreviations:

- Try to use as little as possible (better readability).
- Abbreviations can be used when the readership is familiar with the topic or to avoid repetitions (Field, 2013).
- When abbreviations are used, the word must be written out at the beginning of the respective chapter and behind that the abbreviations in brackets.
- Exception: abbreviations that are used in the current dictionary (etc., i.e., all measurement units (cm, kg, min, etc.)

Some notes on footnotes:

- Footnotes contain essential and additional information that would disturb the text flow.
- Footnotes do *not* contain the necessary literature citations; those have to be mentioned in the main text (*Chapter 3.3.1*).
- Note: footnotes break the reading rhythm of the main text. Use them as little as possible (in contrast to social science; if possible, refrain completely from using footnotes to improve readability).
- When footnotes are employed, they need to be numbered continuously.
- The style sheet Footnote can be adjusted in Word to the following: *font*: identical to main text; *font size*: 10 Pt.; *justified text*; *indentation*: hanging = 0.5 cm; *paragraph spacing: Before* and *After* = 0 Pt.; *line spacing* = 12 Pt.)

3.2 Content

This part about the design of the content refers to the general information that has to be discussed in the single chapters of the thesis. Some suggestions concerning the introduction, the theoretical and empirical background, the hypotheses as well as the description of the empirical data collection, discussion and conclusion are given.

The introduction aims to present the current relevance of the research topic and tries to arouse interest for it in the readership. The content should thus distinguish clearly between the broad field of sport science and psychology and emphasise the position of this thesis (clarify object and benefit). This can be done by giving a first impression on the underlying problem, a short outline of the selected topics and possibly a rationale on the own motivation for this subject. Moreover, the structure of the thesis can be explained (O'Donoghue, 2009). The introduction should not exceed two to three pages.

Tip for the introduction: The start can be formulated as a daily phenomenon or problem.

The theoretical and empirical background can be discussed in one chapter (about 50% of the whole thesis). On the one hand, the practical problem should be described in detail, on the other, the current empirical state related to the field must be summarised. The aim is to improve the understanding of the problem. Additionally, the student should show that he or she has studied the incorporated theories and was able to apply those to the problem. The questions and problems must be worked out and transparently explained based on the existing literature.

Tip for the background: What is the current theoretical and empirical state and which questions arise from there?

From the content of the previous chapter (theoretical and empirical background) an exact problem and the associated hypotheses are derived. When the theory does not give away a clear hypothesis, the research issue should be formulated exploratively. Hypotheses are answers to differentiated research issues and must be formulated precisely (logically consistent; O'Donoghue, 2009), related to the theory described previously. This step emphasizes that (I) the hypotheses are formulated theory-driven and (II) the part concerning the theory sufficiently contributes to the understanding. At the end, the established hypotheses will be taken up again and examined.

Tip for the hypotheses:	The statistical procedures that will be needed for the hypothesis testing can be identified by the formulation of the hypotheses (Field, 2013).

The chapter on problem/hypotheses serves as the transition from the existing knowledge to the own empirical experiment or field study.

The presentation of the empirical examination must be organized in such a way that the single work steps are comprehensible and replicable. Therefore, the chapter has to cover the following topics that describe the chosen method precisely: design of experiment, sample size, instrument, treatment, procedure and statistical analysis.

The design of the experiment included the empirical starting point on which the study is based. This covers the kind of experiment (survey, experiment, etc.) and the design of the whole examination (multiple studies, relation between the performed experiments, etc.) Subsequently, detailed information on the sample are given. Depending on the study, those include specifications on the subsample (sport students, journalists, spectators, etc.), gender, age, weight, height, experience, level of education and other relevant aspects. Numerical information (age, weight, height, experience, etc.) have to be given by the mean (*M*) and the standard deviation (*SD*). Additionally, it has to be justified why this subsample was chosen for the experiment.

The description of the chosen instrument includes relevant information i.e. on the used questionnaire and important values for comparison concerning the hypotheses like the dependent and independent variables, but also confounders and control variables. Depending on the study design the student has to justify at this point why for example rooms must be prepared beforehand or how the questionnaire is performed. Furthermore, the sources of the used instruments have to be mentioned (e.g. Test of Gross Motor Development-2, Ulrich, 2000) and quality criterions (objectivity, reliability, validity).

The chapter treatment describes the used interventions (e.g. different types of training, stimuli in a pre-post design, environment manipulations, etc.). Those must be defined thoroughly and comprehensively.

The spatial and temporal relations between the necessary materials (experimental plan, instructions for participants). Moreover, an indication has to be given of how long the experiment lasts, when it was performed, and which problems occurred. Those have to be interpreted in the later analysis with regard to their meaning (Vincent, 2012). The paragraph about the data analysis gives only information on the statistical methods. The necessary processes (e.g. Chi Square, t-, Mann-Whitney U test, etc.) and the applied software are named (e.g. SPSS, AMOS, etc.). It is not required to elaborate on those standardized processes and the software. In contrast, complex procedures that are derived from special programming or calculations, should be described sententiously.

Tip for the methods:	In the method chapter the own study should be displayed in such a way that the readership will be able to replicate it.

The presentation of the results is highly related to the topic of the whole thesis and the formulated problems/ hypotheses. The author needs to be aware that on the one hand his or her findings are described problem/ hypotheses driven and, on the other hand, the "read threat of the argumentation" does not get lost (presentation of relevant results). For a better understanding figures and tables are suitable to present differences or relationships visually (*Chapter 3.3.2*). The results are analysed descriptively as well as statistically secured (Field, 2013). The statistical characteristic values that are relevant with regard to the analysis and the used procedure, are named in the text (*Chapter 3.3.3*). Those form the bases for the decision if a hypothesis can be confirmed or has to be rejected. It is sufficient to name the results once.

Tip for the results:	It is helpful to present the results according to this order: a short explanation of the hypothesis, descriptive statistics (with figures or tables), presentation of the necessary statistical tests and resulting values, confirmation or rejection of hypothesis.

In the discussion the results are interpreted in relation to the proposed theory. The scientific and possibly practical relevance of the own findings has to be highlighted and discussed critically on the basis of the worked-out background (Field, 2013). The student has to be critical concerning the theory, the individual methods of the study and the relevance of the thesis on the way of contributing to the theory, to the sport practice and to future studies. At this point explanations for “surprising” findings can be given (subsamples, confounders, theoretical access, etc.).

At the end of the discussion suggestions for future research are proposed, that relate to further aspects of the study like current findings that could not be dealt with in this thesis.

Tip for the discussion:	It is not necessarily a sign of poor scientific working if the findings contradict one or more of the proposed hypotheses. This rather gives the opportunity to draw one's own conclusions on the theory and discuss its suitability.

The summary provides a short overview over the most important aspects of the whole thesis (Field, 2013), containing the theoretical framework, the central problem or hypotheses, the

methods and relevant results as well as the statements of the discussion. The chapter should not exceed two to three pages (in the bachelor thesis maximally one page).

Tip for the summary: This part should not contain new information (results or interpretation).

3.3 APA criteria

The basis of theses in the field of sport science is the current APA standard (American Psychology Association). To keep it short in this guideline, we will not mention all criteria, which can be looked up in the current issue of the APA criteria and related webpages. Rather, we will here emphasize essential parts that are most important to consider while writing.

In the following, the central criteria of scientific writing are described. The core aspects are the various procedures of citing from different publications (*Chapter 3.3.1*), the presentation of figures and tables (*Chapter 3.3.2*), the indication of statistical values (*Chapter 3.3.3*) and the design of the reference list (*Chapter 3.3.4*).

3.3.1 Citation rules

Scientific theses are based on already published articles or books. Those sources must be indicated. This includes adopted thoughts, information and literal formulations (analogous and literal citations). The style of citation in the written text is defined by the APA standard. Those formal rules must be fulfilled!

When the article to cite is written by two authors, the word “and” is used in the text. This is different to a citation in brackets: here, the symbol "&" connects the two authors. If the paper is written by three or more authors, those must all be named in the first citation. In subsequent references, their names are shortened to: “first author et al. (year)”.

The analogous citation is embedded in a sentence without quotations marks (“...”). The author and year of publication of the source are either named during the sentence or listed at the end in brackets.

Examples for analogous citations:

> ... Ericsson and Hagemann (2007) assume that ...
>
> ... on the assumption of the expert-performance approach (Ericsson & Hagemann, 2007).
>
> ... the findings of Williams et al. (1999) suggest that ...

The literal citation must be indicated by quotation marks ("...") and must contain the exact wording from the literature source (content, spelling, punctuation), even if it is incorrect or according to older spelling rules in the original. In the case of a literal citation, the reference is complemented by the page number (author, year, page). Citations that exceed the amount of 40 words are presented as free paragraphs, both left and right indented, without the double quotation marks (block citations).

Changes in the original are only permitted in the following exceptions:

- When the first letter of the citation must be adapted to the upper- and lower-case rules according to the syntax of the sentence.
- When the final punctuation mark of the citation must be adapted to the syntax of the sentence it is embedded in.
- Ellipses within a cited sentence are marked by three omissions within square brackets, i.e.: "the […] hypotheses",
- Insertions of any kind, that are not part of the cited material, have to be put in squared brackets as well, i.e.: "They [the teams] had...".
- Emphases (accentuations) are only allowed if they are indicated by the note emphasis added in squared brackets, i.e.: "a special [emphasis added] meaning".

Example for a literal citation:

> …suspense is defined as a "long anticipation of a harmful confrontation" (Nomikos et al., 1968, p. 207).

Secondary citations are marked in that way that the original article is documented and added by the note "cited by (present source)". Only the present source and not the orginal literature is reported in the reference list (APA, 2009).

Example for a secondary citation:

> …Müller (1954; quoted from Barnabas, 1960) …

3.3.2 Figures and tables

Figures and tables serve as an aid to illustrate the data (Field, 2013) and are located in the main text (not the appendix). Furthermore, all figures and tables must be mentioned and explained in the text. However, redundant listing of the information that are displayed in the figures/tables should be avoided (O'Donoghue, 2009).

Figures and tables are numbered consecutively and follow the same design, meaning that they have to be unambiguous, practical, and clear. It is therefore recommended to use a black-and-white design together with different shades of grey. As long as the figures and tables are not made by the student, the sources must by mentioned as followed: "last name of author, year, page number". If the depiction of the data is changed in any form, the phrase "adapted from" is added.

Example of a figure:

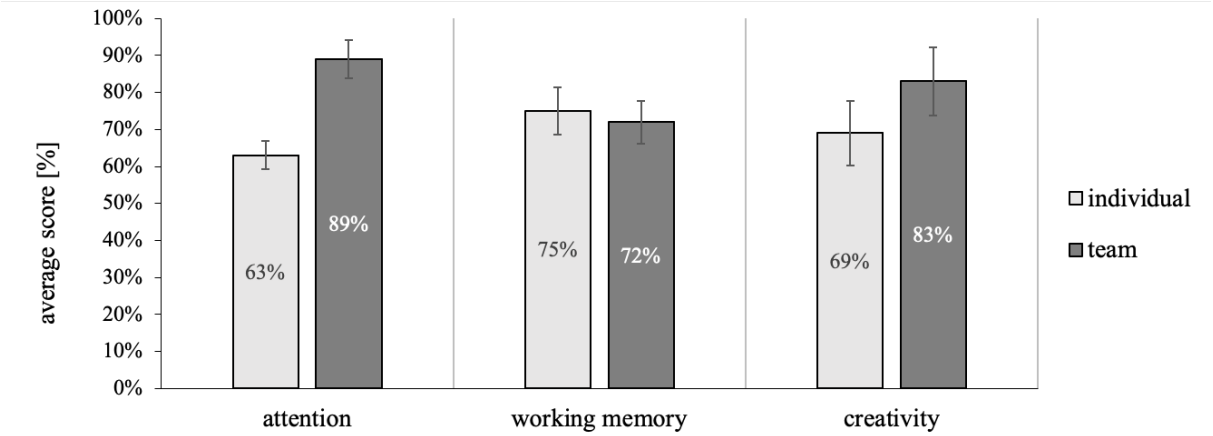

Figure 1. Average score for every cognitive test, split by individual athletes (dark grey) and team athletes (light grey), $N = 264$.

Some notes on figures:

- Figures are easily created in Excel or PowerPoint - the graphics made by SPSS are hardly suitable because they can barely be changed.
- The position of the title: below the figure,
  font: identical to main text; *font size*: 10 pt.; *italic*; *justified*; *indentation*: hanging = 1.6 cm; *paragraph spacing before* = 9 pt. and *after* = 0 pt.; *line spacing* = 14 pt.
- Figures must be self-explainable.
- Complete labelling of axes
- Avoid distortions (origin of axes always at "0")

Example of a table:

Table 1. *Erreichte Punktzahl pro kognitivem Test nach Teamsportler*innen (hellgrau) und Individualsportler*innen (dunkelgrau), N = 264.*

Type of sport		**attention**		**working memory**		**creativity**	
	N	*M*	*SD*	*M*	*SD*	*M*	*SD*
individual	136	63%	3,8%	75%	6,4%	69%	8,7%
team	128	89%	5,1%	72%	5,8%	83%	9,2%
total	264	75,61%	4,43%	73,55%	6,11%	75,79%	8,94%

Some notes on tables:

- Position of title: above table (heading)
- *Font: identical to main text; font size: 10 pt.; italic; justified; indentation: hanging paragraph spacing before = 24 pt. and after = 6 pt.; line spacing = 14 pt.*
- In case of annotations on the table: insert immediately below the table (*font*: identical to main text; *font size*: 10 pt.; *italic*; *justified*; *indentation* = 0 cm; *paragraph spacing before* = 0 pt. and *after* = 12 pt.; *line spacing* = 14 pt.)
- Tables must be self-explanatory.
- Complete labelling of all table sections

3.3.3 Statistical values

The statistical values that have to be given when using specific test procedures, are listed in the following paragraph. It is recalled that this guideline cannot mention all test procedures, but rather focus on the most important and most used calculations. Exact numbers of means and corresponding standard deviations must be provided as well.

Chi² test: χ^2(df) = ; p =; C =
Kolmogorov-Smirnov test: Z(df) = ; p =
T test: t(df) = ; p = ; d =
Kruskal-Wallis test: H(df) = ; p =
Mann-Whitney test: U(df) = ; z = ; p =
Wilcoxon Signed Rank test: z(df) = ; p =
Correlation: r_P = ; p = (Pearson); r_S = ; p = (Spearman)
Regression: R^2 = ; ΔR^2 = ; $F(df_1,df_2)$ = ; p = ; *95% CI* [cond.1, cond.2]
Analysis of variance (ANOVA): $F(df_1,df_2)$ = ; p = ; η_p^2 =
Explorative factor analysis (EFA): *IR* = ; *t* = ; *FR* = ; *AAV* =

The APA standard additionally defines that all statistical values must be written in italics (APA, 2009). Instead of a comma, a full stop is used (i.e.: $M = 3.5$; $SD = 0.24$). If a value cannot exceed 1 ("< 1"), the "0" can be left out (APA, 2009). If the value can exceed 1 ("> 1") the "0" in front of the full stop is required.

Within the text the numbers 0 to 9 are written as words, as long as there are no units given (i.e.: "... two teams compete against each other... "). Numbers equal to or bigger than 10 as well as numbers with given units are mentioned as numerals (i.e.: "The first German soccer league consists of 18 clubs."; "The last measurement at t = 2sec...").

3.3.4 Reference list

The reference list forms the end of the whole thesis, following the same layout as the other registers. It contains all the sources that are mentioned in the thesis (not more, not less). The sources are ordered alphabetically according to the last name of the first author. If more articles

by the same fist author, but with different co-authors are cited, they are ordered alphabetically according to the last name of the second author. All authors are named; the abbreviation “et al.” may not be used in this context (APA, 2009; exception: in case of eight or more authors). The articles with the same first author are ranked by their year of publication (from old to new). In case the same author published two articles in one year, the publications are ordered according to the title. A small letter is added after the year of publication to make it transparent which citation belongs to which reference.

Examples of the order in the reference list:

Abramson, D. S. (1981). ....

Abramson, D. S. (1982a). ....

Abramson, D. S. (1982b). ....

Abramson, D. S., Giesecke, H. & Rack, W. (1977).

Abramson, D. S. & Tack, W. (1984). ...

Abramson, R. P. (1985). ....

Abramson, R. P. (in Druck). ....

Borg, B. (1978). ...

Scientific articles or theses that are conducted in the area of sports science or psychology, are required to have a reference list at the end of the document according to the most recent APA criteria. In the following, the basic guidelines are listed, however, exemptions and additional rules should be checked on the official website (APA, 2020).

General notes on literature references:

All literature sources contain at least the following information:

- Author (last name, initial of first name; in case of several first names, the initials are separated with a space)
- Year of publication
- Title of publication
- publishing information (see the following notes and examples)

Bibliography of books

last name, initial of first name. (year of publication). *Title of the book*. *Subtitle* (edition, name of publication series, volume). Place of publication: Publisher.

Examples:

Magill, R. A., & Anderson, D. (2007). *Motor learning and control: Concepts and applications* (Vol. 3). New York: McGraw-Hill.

Hagemann, N. (2005). *Heuristische Problemlösestrategien von Sportspieltrainern*. Lengerich: Pabst.

Bibliography of articles in anthologies

last name, initial of first name. (year of publication). Title of the article. Subtitle. In initial of the first name and name of the editors (Eds.), *Title of the anthology* (issue, name of series, volume, pages). Place of publication: Publisher.

Examples:

Côté, J., Baker, J. & Abernethy, B. (2007). Practice and play in the development of sport expertise. In R. C. Eklund & G. Tenenbaum (Eds.), *Handbook of Sport Psychology* (3rd ed., pp. 184-202). New Jersey: John Wiley & Sons.

Ericsson, K. A. & Hagemann, N. (2007). Der „Expert-Performance-Approach“ zur Erklärung von sportlichen Höchstleistungen: Auf der Suche nach deliberate practice zur Steigerung der sportlichen Leistung. In N. Hagemann, M. Tietjens & B. Strauß (Hrsg.), *Psychologie der sportlichen Höchstleistung* (S. 17-39). Göttingen: Hogrefe.

Bibliography of articles in journals without issue-pagination

last name, initial of first name. (year of publication). Title of the article. *Name of the journal, issue*, pages.

Examples:

Hagemann, N. & Strauss, B. (2006). Perzeptive Expertise von Badmintonspielern. *Zeitschrift für Psychologie*, *214*, 37-47.

Loffing, F., Hagemann, N. & Strauß, B. (2009). The serve in professional men's tennis: Effects of players' handedness. *International Journal of Performance Analysis in Sport, 9*, 255-274.

Bibliography of articles in journals paginated by issue

last name, initial of first name. (year of publication). Title of the article. *Name of the journal, issue* (volume), pages.

Examples:

Crum, B. (1992). The critical-constructive movement socialisation concept: Its rational and its practical consequences. *International Journal of Physical Education, 29* (1), 9-17.

Schorer, J., Baker, J., Büsch, D., Wilhelm, A. & Pabst, J. (2009). Relative age, talent identification and youth skill development: Do relatively younger athletes have superior technical skills? *Talent development & excellence, 1* (1), 45-56.

Bibliography of research reports

last name, initial of first name. (year of publication). *Title of the manuscript*. Type of source, name and location of the university.

Examples:

Alfermann, D., Saborowski, C. & Würth, S. (1997). *Soziale Einflüsse auf die Karriereübergänge bei jugendlichen Athletinnen und Athleten in Großbritannien und den neu-en Bundesländern. Entwicklung und Überprüfung der deutschsprachigen Messinstrumente*. Unveröffentlichter Forschungsbericht, Universität Leipzig.

Blum, M. (1980). *Experimentelle Untersuchung zur Auswirkung körperlicher Vorbeanspruchung auf eine nachfolgende psychomotorische Tätigkeit*. Unveröffentlichte Diplomarbeit, Deutsche Sporthochschule Köln.

Bibliography of electronic media

last name, initial of first name. (year of publication or revision). *Title of the essay*. Date of access, URL

Gerlach, E. (2002). *Projekt „Sportengagement und Entwicklung von Heranwachsenden. Eine Evaluation des Paderborner Talentmodells“*. Zugriff am 28. Februar 2002 unter http://sport.upb.de/entwicklung/sportundentwicklung.html

Kromeyer-Hauschild, K. & Wabitsch, M. (2006). *Aktuelle Sicht der Prävalenz und Epidemiologie von Übergewicht und Adipositas bei Kindern und Jugendlichen in Deutschland*. Zugriff am 20. Januar 2006 unter http://www.a-ga.de/aga_content.html

Citation software like e.g. Mendeley, Citavi or Endnote can save a lot of here. These mostly freely accessible programs allow the insertion of literature citations and the automatic creation of a bibliography according to selected citation standards. Here, too, errors can occur (although much less frequently than when done manually), so a final check before submission should be scheduled.

4 Own evaluation of the scientific thesis

Before the thesis is finally submitted it is advised to check the whole text one last time. Especially the steps that Microsoft Word 2016 or other text programs do automatically, should be tested (mistakes by the software are viewed as mistakes by author!). The following questions might help to identify eventual mistakes.

About the layout:

- Does the cover page contain all relevant information?
- Are all registers correct regarding the headings and page numbers?
- Is the font layout consistent and clearly structured?
- Are the expressions adequate, the grammar and spelling correct?
- Is the hyphenation given by the text software correct?

About the content:

- Is the structure of the thesis transparent (red thread of argumentation)?
- Is the general scientific problem clearly presented?
- Are the results discussed based on the presented state of research?
- Are all sources cited following the APA standard?
- Are all figures and tables readable?
- Does the content list follow the guidelines?

At this point it should be noted that the department of sport psychology does not accept reading extracts prior to the submission of the thesis.

Finally, the team of the department of sport psychology wishes you success with writing the thesis!

5 Reference list

American Psychological Association (APA). (2009). Publication Manual of the American Psychological Association (6th ed.). Washington: American Psychological Association.

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Thomas, J. R. & Nelson, J. K. (2011). Research methods in physical activity (6th ed.). Human Kinetics: Champaign (IL)

Vincent, W. J., & Weir, J. P. (2012). Statistics in Kinesiology (4th ed.). Human Kinematics: Champaign (IL)