Original research articles

Original research articles

Continued

Articles – in general

Definitions and delineations

Why to publish?

Scientist as creator and user of scientific information

How to write original research articles?

Structure in details

The most interesting part ahead of us ;-))

Original research articles

Continued

Articles – in general

Definitions and delineations

Articles – in general

- Means of publishing results of research or development to the community
- Claims, proves, argues, implies
- Aims at impact on the academic community (offers concepts, methods, explanations, etc.)
- Main type of academic writing

Articles

- original research articles
- short communications (*Research notes)*
- reviews: narrative and systematic reviews
- case reports/case series
- technical notes
- letters to the editor, correspondences
- editorials, commentaries
- pictorial essays
- grey literature - ???

What is an original research article?

- An original research article (also called primary scientific literature) will follow the scientific format, undergo peer review and be published in academic journals. However, not everything that meets those criteria is an original research article. If you aren't sure if something is an original research article, consider its purpose, author and audience.

Source: North Dakota State University, USA:

https://library.ndsu.edu/guides/finding-and-identifying-original-research-articles-sciences

Purpose

- An *original research article* is an article that is reporting original research about new data or theories that have not been previously published. That might be the results of new experiments, or newly derived models or simulations. The article will include a detailed description of the methods used to produce them, so that other researchers can verify them. This description is often found in a section called *methods* or *materials and methods* or similar. Similarly, the results will generally be described in great detail, often in a section called *results*.

Source: North Dakota State University, USA:

https://library.ndsu.edu/guides/finding-and-identifying-original-research-articles-sciences

Author

- Since the original research article is reporting the results of new research, the authors should be the scientists who conducted that research. They will have expertise in the field, and will usually be employed by a university or research lab.
- In comparison, a newspaper or magazine article (such as in *The New York Times* or *National Geographic*) will usually be written by a journalist reporting on the actions of someone else.

Source: North Dakota State University, USA:

https://library.ndsu.edu/guides/finding-and-identifying-original-research-articles-sciences

Audience

- An original research article will be written by and for scientists who study related topics. As such, the article should use precise, technical language to ensure that other researchers have an exact understanding of what was done, how to do it, and why it matters. There will be plentiful citations to previous work, helping place the research article in a broader context. The article will be published in an academic journal, follow a scientific format, and undergo peer-review.

Source: North Dakota State University, USA:

https://library.ndsu.edu/guides/finding-and-identifying-original-research-articles-sciences

What is Original Research?

Original research is considered a primary source.

An article is considered original research if...

- it is the report of a study written by the researchers who actually did the study.
- the researchers describe their hypothesis or research question and the purpose of the study.
- the researchers detail their research methods.
- the results of the research are reported.
- the researchers interpret their results and discuss possible implications.

Why to publish?

Scientist as creator and user of scientific information

You want to be published but …

You also want to be widely read and cited! (Hirsh index, citation index, etc.)

Tips:

- Write always simple
- Write to express not to impress
- Consider your audience – they may be not from your field

KISS

Keep It Simple and Stupid

KISS, an acronym for **keep it simple, stupid**, is a design principle noted by the U.S. Navy in 1960

https://en.wikipedia.org/wiki/KISS_principle

or

Keep It Simple and Short

Simplicity

"If you can't explain something simply, you didn't understand it well enough"

Albert Einstein

My recommendations:

- Simplicity
- Consistency
- Cogency

How to write original research articles?

Workshops, articles, publishers

- Publishing Campus by Elsevier –

- https://www.elsevier.com/connect/publishing-campus-provides-free-online-skills-training-for-researchers

now Research Academy:

- https://researcheracademy.elsevier.com/

- Nature (journal):
- https://www.springernature.com/gp/authors/campaigns/writing-a-manuscript

Journals authors guidelines

- Nature:

https://www.nature.com/scitable/topicpage/scientific-papers-13815490/

https://www.nature.com/articles/d41586-018-02404-4

Articles about how to write scientific articles

IJSPT

INVITED COMMENTARY

HOW TO WRITE A SCIENTIFIC ARTICLE

Barbara J. Hoogenboom, PT, EdD, SCS, ATC[1]
Robert C. Manske, PT, DPT, SCS, ATC[2]

ABSTRACT

Successful production of a written product for submission to a peer-reviewed scientific journal requires substantial effort. Such an effort can be maximized by following a few simple suggestions when composing/creating the product for submission. By following some suggested guidelines and avoiding common errors, the process can be streamlined and success realized for even beginning/novice authors as they negotiate the publication process. The purpose of this invited commentary is to offer practical suggestions for achieving success when writing and submitting manuscripts to *The International Journal of Sports Physical Therapy* and other professional journals.

Key words: Journal submission, scientific writing, strategies and tips

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https://pdcrodas.webs.ull.es/informatica/HowToWriteAScientificArticle.pdf

Structure

- IMRaD

- *I*ntroduction
- *M*ethods
- *R*esults

  *a*nd
- *D*iscussion

Structure

- Title
- Abstract
- Keywords

- Introduction (literature review or background or conceptual framework)
- Methods
- Results
- Discussion

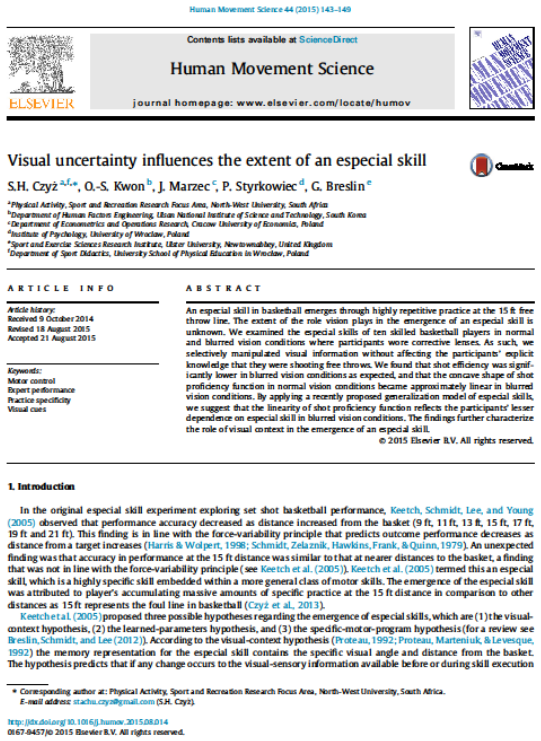
- Conclusions, conflict of interest statement, etc.
- Acknowledgments
- References

Structure - variations

- Human Movement Science – Highlights
- https://www.elsevier.com/journals/human-movement-science/0167-9457/guide-for-authors

Highlights:

1. Bayesian model was used to characterize the shot performance curve and fit data
2. Motor and visual systems were analyzed separately in visual occlusion condition
3. Visual occlusion influenced motor system rather than visual in especial skill
4. Noise in motor system may influence players' confidence



Human Movement Science 44 (2015) 143–149

Contents lists available at ScienceDirect

Human Movement Science

journal homepage: www.elsevier.com/locate/humov

Visual uncertainty influences the extent of an especial skill

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ARTICLE INFO

Article history:
Received 9 October 2014
Revised 18 August 2015
Accepted 21 August 2015

Keywords:
Motor control
Expert performance
Practice specificity
Visual cues

ABSTRACT

An especial skill in basketball emerges through highly repetitive practice at the 15 ft free throw line. The extent of the role vision plays in the emergence of an especial skill is unknown. We examined the especial skills of ten skilled basketball players in normal and blurred vision conditions where participants wore corrective lenses. As such, we selectively manipulated visual information without affecting the participants' explicit knowledge that they were shooting free throws. We found that shot efficiency was significantly lower in blurred vision conditions as expected, and that the concave shape of shot proficiency function in normal vision conditions became approximately linear in blurred vision conditions. By applying a recently proposed generalization model of especial skills, we suggest that the linearity of shot proficiency function reflects the participants' lesser dependence on especial skill in blurred vision conditions. The findings further characterize the role of visual context in the emergence of an especial skill.

1. Introduction

In the original especial skill experiment exploring set shot basketball performance, Keetch, Schmidt, Lee, and Young (2005) observed that performance accuracy decreased as distance increased from the basket (9 ft, 11 ft, 13 ft, 15 ft, 17 ft, 19 ft and 21 ft). This finding is in line with the force-variability principle that predicts outcome performance decreases as distance from a target increases (Harris & Wolpert, 1998; Schmidt, Zelaznik, Hawkins, Frank, & Quinn, 1979). An unexpected finding was that accuracy in performance at the 15 ft distance was similar to that at nearer distances to the basket, a finding that was not in line with the force-variability principle (see Keetch et al. (2005)). Keetch et al. (2005) termed this an especial skill, which is a highly specific skill embedded within a more general class of motor skills. The emergence of the especial skill was attributed to player's accumulating massive amounts of specific practice at the 15 ft distance in comparison to other distances as 15 ft represents the foul line in basketball (Czyż et al., 2013).

Keetch et al. (2005) proposed three possible hypotheses regarding the emergence of especial skills, which are (1) the visual-context hypothesis, (2) the learned-parameters hypothesis, and (3) the specific-motor-program hypothesis (for a review see Breslin, Schmidt, and Lee (2012)). According to the visual-context hypothesis (Proteau, 1992; Proteau, Marteniuk, & Levesque, 1992) the memory representation for the especial skill contains the specific visual angle and distance from the basket. The hypothesis predicts that if any change occurs to the visual-sensory information available before or during skill execution

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http://dx.doi.org/10.1016/j.humov.2015.08.014
0167-9457/

https://www.sciencedirect.com/science/article/abs/pii/S0167945715300245

Human Movement Science 32 (2013) 708–718

Contents lists available at ScienceDirect

Human Movement Science

journal homepage: www.elsevier.com/locate/humov

An especial skill in elite wheelchair basketball players

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[e] Department of Psychological Sciences, Purdue University, West Lafayette, USA

ARTICLE INFO

Article history:
Available online 24 August 2013

Keywords:
Specificity
Generality
Schema theory
Disability
Motor learning

ABSTRACT

We aimed to investigate whether an especial skill is present in elite wheelchair basketball players when taking twenty shots with a regular basketball from five different distances (11 ft, 13 ft, 17 ft, & 19 ft) from the basket including the free throw line (15 ft). Twelve elite male basketball players participated. The results showed that as distance increased shot accuracy decreased in line with force by variability predictions for the 11 ft, 13 ft, 17 ft, & 19 ft distances. However, shot performance at the free throw line where players are more familiar with practicing free throw shots did not follow this trend. A linear regression line was drawn to predict performance at the free throw line based on nearer (11 ft & 13 ft) and farer (17 ft & 19 ft) distances to the basket, this was then compared to actual performance. A significant difference between actual and predicted scores was found ($p < .05$) supporting the presence of an especial skill. Significant positive correlations were found for the 11 ft and 17 ft distance, age, years of playing, and accumulated practice hours with performance at the 15 ft line ($p < .05$). These correlations imply the operation of generalization in the especial skill. This observation received support from applying a model in which shot accuracy as a function of distance was approximated by two regression lines.

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http://dx.doi.org/10.1016/j.humov.2012.08.005

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an especial skill in elite wheelchair basketball players highlights

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https://www.sciencedirect.com › science › article › abs › pii

An especial skill in elite wheelchair basketball players ...

An especial skill in elite wheelchair basketball players ... **Highlights**. ▻ First study looking at **especial skill** effect in **elite wheelchair basketball players**.

by K Fay · 2013 · Cited by 14 · Related articles

https://www.researchgate.net › publication › 256188041_...

An especial skill in elite wheelchair basketball players ...

We aimed to investigate whether **an especial skill** is present in **elite wheelchair basketball players** when taking twenty shots with a regular basketball from five ...

Structure – variations - submission

- Manuscripts for submission may differ from the written once:

e.g. Journal of Motor Behavior

https://www.tandfonline.com/action/authorSubmission?show=instructions&journalCode=vjmb20#structure

Recommended order for writing a manuscript:

- Materials and Methods
- Results

- Introduction
- Discussion
- Conclusion

- Title
- Abstract

Source: https://www.springernature.com/gp/authors/campaigns/writing-a-manuscript/structuring-your-manuscript

Other recommendations

- Include all tables and figures in the text in the order they should appeared in a printed/online version

- You may adjust the manuscript while submitting according to the specific journal requirements (figures at the end of a manuscript or in separate files, similarly tables, blind title page, etc.)

- Write a manuscript in a general form (IMRaD) and then amend it according to the guidelines

Structure in details

The most interesting part ahead of us ;-))

IMRaD

- ***I***ntroduction – why did your study need to be done?

- ***M***ethods - what did you do?

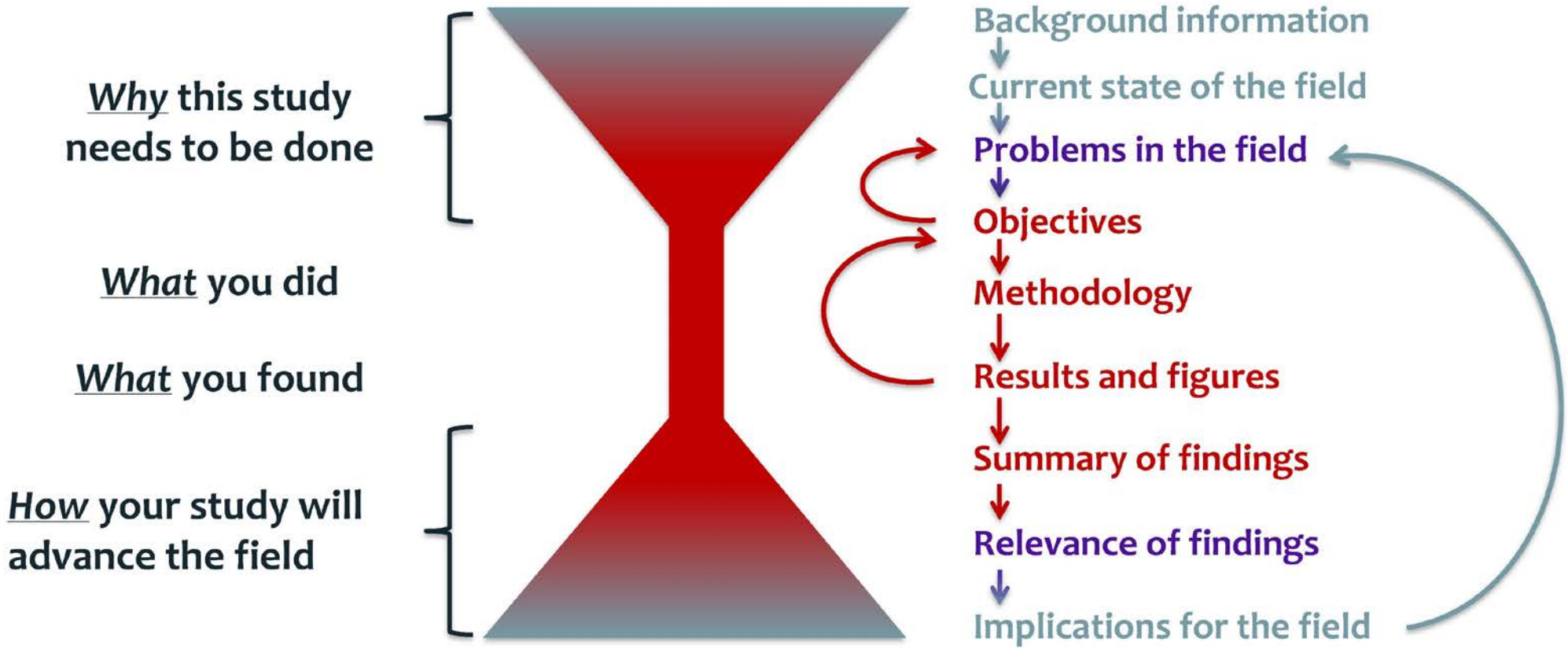
- ***R***esults - what did you find?

a*nd*

- ***D***iscussion - how will your study advance the field?

Linking your ideas

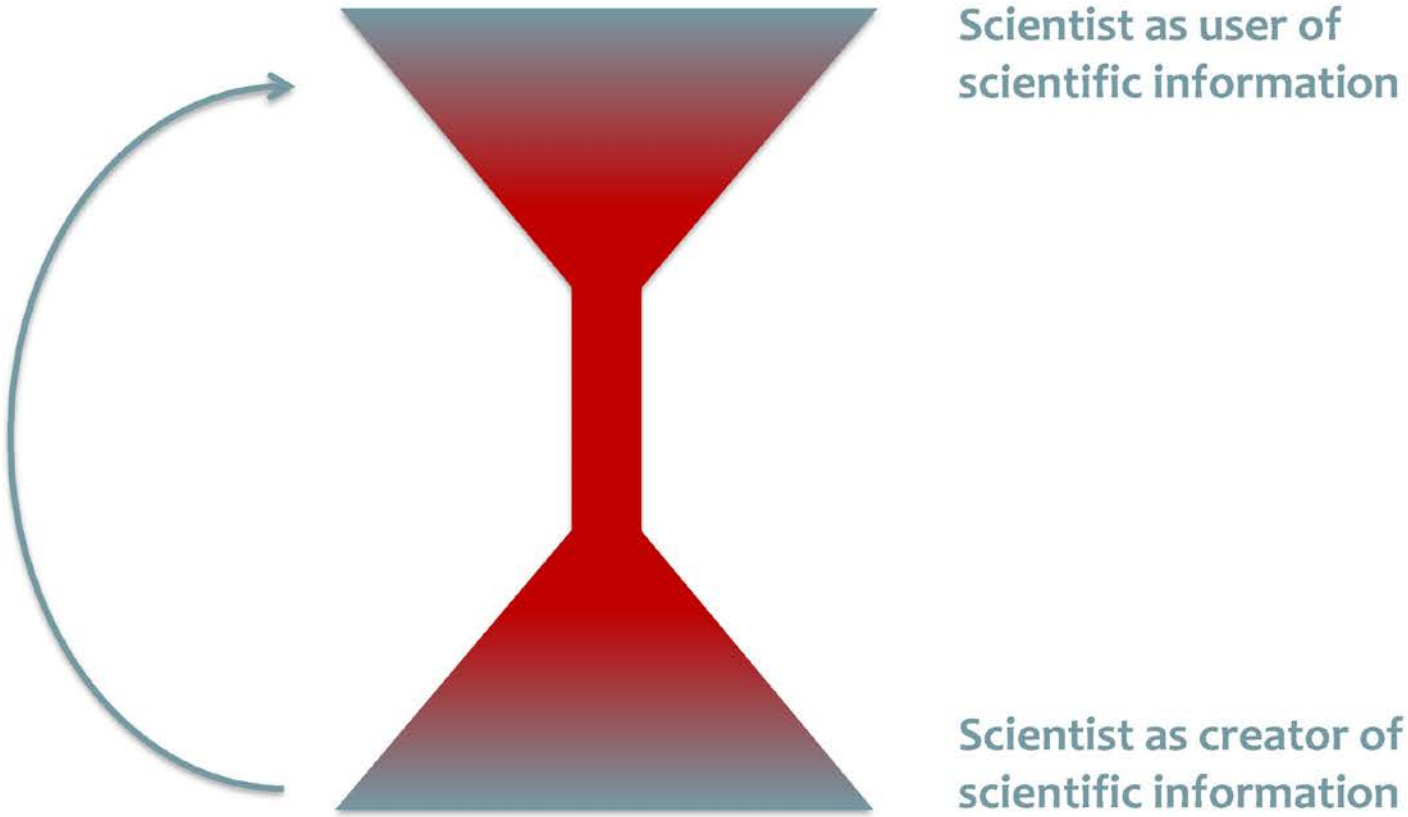
Answer the *four key questions* for your reader



Logically link your ideas throughout your manuscript

Source: Step-by-step guide to prepare a successful paper for publication by Dr. Nabil Khélifi – provided by SpringerNature

Research cycle and Necessity to publish



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