

Methodical Exploration of Novel Learning - an Æquivocal Lifelong Learning Deductive Analysis Discussion of Opportunistic Knowledge Transfer and Rational Inquiry in New Educational Norms

H. Johansen, F. Horn, N. Eriksen, F. Ulleberg, Ø. Holmsen, J. Juve, R. Holmberg, S. Hansen, M. Monsen, O. Frantzen, R. Kvammen, A. Martinsen, M. Isaksen, A. Brustad,

ABSTRACT

In an era where the boundaries of learning extend beyond traditional classrooms, our research delves into the intricate fabric of education. This study navigates uncharted waters, seeking to unravel the enigma of lifelong learning. This article is utter nonsense made using the good old-fashioned copy-paste method with Microsoft Copilot and a downloaded Word-template. The purpose is just to prove a point that artificial intelligence is far more than making poems and funny pictures in different artistic styles. All it took was a few cups of coffee, and an early Saturday morning before the kids woke.

INTRODUCTION

In the ever-evolving landscape of education, where paradigms shift and traditional norms are challenged, the pursuit of knowledge becomes both an art and a science. Our research embarks on a methodical exploration—an intellectual odyssey—into the uncharted territories of novel learning. Unveiling the Æquivocal means that lifelong learning transcends the confines of classrooms and textbooks. It is a perpetual voyage, where curiosity fuels the ship, and the compass points toward unexplored shores. But what lies beyond the horizon? How do we navigate the currents of information overload, opportunistic knowledge transfer, and the rational inquiry that shapes our understanding? Because our lens is deductive—a prism through which we dissect, analyze, and synthesize. We unravel the threads of pedagogy, cognition, and epistemology, weaving them into a tapestry of understanding. As we peer through this lens, we encounter paradoxes, contradictions, and unexpected harmonies. The Æquivocal emerges — a dance between certainty and ambiguity.

OPPORTUNISTIC KNOWLEDGE TRANSFER

In the age of interconnectedness, knowledge flows like a river, meandering across disciplines, cultures, and minds. We explore the dynamics of opportunistic knowledge transfer—the serendipitous encounters, the cross-pollination of ideas, and the transformative power of unexpected connections. How do we harness this flow? How do we channel it into deliberate learning?

© 2024 Heine Skipenes (Author) is with the Norwegian University of Science and Technology (NTNU). Address: NTNU, Postboks 8900, NO-7491 Trondheim. E-mail heine.skipenes@ntnu.no. This document is a part of the project “Pilotere Copilot for Microsoft 365” <https://www.ntnu.no/copilot>

RATIONAL INQUIRY IN NEW EDUCATIONAL NORM

The very fabric of education is rewoven. New norms emerge—adaptive, inclusive, and responsive. Rational inquiry becomes our compass. We question assumptions, challenge dogmas, and embrace uncertainty. What does it mean to learn in a world where algorithms tutor, virtual classrooms thrive, and personalized pathways beckon? How do we balance tradition with innovation?

May this exploration ignite curiosity, provoke discourse, and illuminate the path toward a more profound understanding of learning. Welcome aboard—the voyage begins. 🌟🚀

METHODS

A. Study protocol

Before we set sail into uncharted research waters, let us unfurl the sails of clarity. The study protocol serves as our navigational chart—a blueprint that guides our scientific voyage. In this chapter, we’ll explore the purpose, structure, and critical elements of a well-crafted protocol. The study protocol is more than a bureaucratic formality; it is the compass that steers our research ship. Its primary objectives include:

Clarity: Clearly defining the research question, objectives, and hypotheses.

Transparency: Ensuring transparency in methodology, data collection, and analysis.

Ethical Framework: Establishing ethical guidelines for participant recruitment, informed consent, and data handling.

Key components of a Comprehensive Protocol include:

Research Question and Objectives: Our North Star—the research question—guides our course. We’ll discuss how to formulate precise questions and align them with overarching objectives.

Study Design: Choose your vessel wisely: observational, experimental, or quasi-experimental? We’ll explore the nuances of each design and their implications.

This is an open access article distributed under the terms of the Creative Commons Attribution License (CC-BY 4.0), which permits the user to copy, distribute, and transmit the work provided that the original author(s) and source are credited.

Participants and Recruitment: Who will join us on this voyage? Defining inclusion and exclusion criteria, recruitment strategies, and sample size calculations.

Data Collection and Measures: Our cargo—data! We'll discuss data sources, instruments, and validation procedures. Remember, garbage in, garbage out.

Statistical Analysis Plan: The compass needle swings toward statistical methods. Hypothesis testing, power analysis, and sensitivity analyses await.

Ethical Considerations: Navigating treacherous waters: informed consent, privacy, and potential risks. Our moral compass must remain unwavering.

Timeline and Milestones: Plotting our course: Gantt charts, milestones, and deadlines. Time is our most precious resource.

Budget and Resources: Counting doubloons: budget allocation, personnel, equipment, and external support.

Conclusion: As we hoist the flag of scientific rigor, let us remember that a well-constructed study protocol is not a mere formality—it is the wind that fills our sails, propelling us toward discovery.

Bon voyage, fellow researcher! 🌟🗺️

I. FINAL CONCLUSION BY MAIN AUTHOR **THIS IS THE ONLY THING YOU NEED TO READ!**

I think I will stop it there. This is really uncomfortable. Making this document makes me question everything I stand for when it comes to the key values and standards of scientific research.

This is what I have done:

1. I made the title first: I asked Copilot to make a title for a research article starting with the letters: "MENLÆLLDADOKTRINEN". I tweaked the words in the title to make the sentence flow better, but also more difficult to understand. I wanted the title to be long to appear more real than it is. The "æ" was of course a problem, so I had to google to find a useful enough word "Æquivocal" which is an obsolete spelling of equivocalⁱ. I chose the letters "Men læll da doktrinen" since this is a theme from a training session I use, to show benefits and disadvantages when using artificial intelligence and understanding how language models work.
2. Who should the authors be? It must seem legit, but also not names that anyone knows. I asked Copilot to give me the names of the original 11 football players on "Bronselaget" from the 1936 Olympics. I did not remember correctly, since I thought that this was in the 1950s. Copilot corrected me and gave me the names. I removed everything but the first letter in their first names since this is a normal standard in scientific texts.
3. What format should I choose? I googled and it took me 20 seconds to find OPEN JOURNAL SYSTEM SERVICESⁱⁱ I downloaded the 2 Column Academic/Scientific Word Templates since I believe that the two columns design make the entire thing seem more legit.

4. I added a black bar on top and entered the word "research". This gives of course no actual value to the contents and scientific quality of the text, it just adds to the appearance.
5. The abstract: I gave copilot the new title and asked it to make me an abstract. I took the two first sentences and added a few just to make sure that the reader understands that there is something wrong.
6. The Introduction and Methods chapters are merely copy-pasting answers after asking Copilot to make me a study protocol. I have formatted the contents to improve the appearance. I kept the emojis just to show how strange it is that copilot uses emojis.

Why did I make this? I hope to make you a bit angry, and I hope that you after reading this will stop and think what is possible if this type of technology is used in the wrong way.

I also hope that you reflect on the fact that when you see Copilot's output in another format: Isn't it all a bit strange? Why does Copilot use emojis? Chatbots like Copilot use emojis to make you as a reader accept the contents more easily: Maybe there is someone real "on the other side"? But when you see emojis in a scientific text, it (hopefully) seems wrong. Why do we accept emojis in a chatbot, but not in a text like this? And isn't it strange how Copilot starts out with just a title, and how fast it jumps to the conclusion that we probably want the text to be filled with naval references? Like we are going on a voyage to discover new lands?

The rest of the document is merely the standard content of the template. Most people do not read the entire article. You read the introduction, summary, and conclusion. The rest is "just there". The references in the endnotes at the bottom of the article are correct.

II. THE WAY FORWARD

By all means. Read the rest of the template as well. It is a great help to understanding how science works, and how important trust is. Trust that the information you are presented with is correct. Trust that everyone is doing what is right, and not cheating. Trust that the organization behind the text is legit, and why the peer review process is so important for the quality of science. The whole point of it is that if someone else want to try the same experiment as you, they will get the same result. It's not magic. It's science.

Template: Chapters III-VI.

III. PROCEDURE FOR PAPER SUBMISSION

A. Selecting a Template (Heading 2)

First, confirm that you have the correct template for your paper size. This template has been tailored for output on the US-letter paper size. Please do not use it for A4 paper since the margin requirements for A4 papers may be different from Letter paper size. Please limit papers to 8 pages max.

B. Maintaining the Integrity of the Specifications

The template is used to format your paper and style the text. All margins, column widths, line spaces, and text fonts are prescribed; please do not alter them. You may note peculiarities. For example, the head margin in this template

measures proportionately more than is customary. This measurement and others are deliberate, using specifications that anticipate your paper as one part of the entire proceedings, and not as an independent document. Please do not revise any of the current designations.

IV. MATH

Before you begin to format your paper, first write and save the content as a separate text file. Keep your text and graphic files separate until after the text has been formatted and styled. Do not use hard tabs, and limit use of hard returns to only one return at the end of a paragraph. Do not add any kind of pagination anywhere in the paper. Do not number text heads—the template will do that for you.

Finally, complete content and organizational editing before formatting. Please take note of the following items when proofreading spelling and grammar:

A. Abbreviations and Acronyms

Define abbreviations and acronyms the first time they are used in the text, even after they have been defined in the abstract. Abbreviations such as IEEE, SI, MKS, CGS, sc, dc, and rms do not have to be defined. Do not use abbreviations in the title or heads unless they are unavoidable.

B. Units

- Use either SI (MKS) or CGS as primary units. (SI units are encouraged.) English units may be used as secondary units (in parentheses). An exception would be the use of English units as identifiers in trade, such as “3.5-inch disk drive”.
- Avoid combining SI and CGS units, such as current in amperes and magnetic field in oersteds. This often leads to confusion because equations do not balance dimensionally. If you must use mixed units, clearly state the units for each quantity that you use in an equation.
- Do not mix complete spellings and abbreviations of units: “Wb/m²” or “webers per square meter”, not “webers/m²”. Spell out units when they appear in text: “. . . a few henries”, not “. . . a few H”.
- Use a zero before decimal points: “0.25”, not “.25”. Use “cm³”, not “cc”. (*bullet list*)

C. Equations

The equations are an exception to the prescribed specifications of this template. You will need to determine whether or not your equation should be typed using either the Times New Roman or the Symbol font (please no other font). To create multileveled equations, it may be necessary to treat the equation as a graphic and insert it into the text after your paper is styled. Number equations consecutively. Equation numbers, within parentheses, are to position flush right, as in (1), using a right tab stop. To make your equations more compact, you may use the solidus ($/$), the exp function, or appropriate exponents. Italicize Roman symbols for quantities and variables, but not Greek symbols. Use a long dash rather than a hyphen for a minus sign. Punctuate equations with commas or periods when they are part of a sentence, as in

$$\alpha + \beta = \chi. \quad (1)$$

Note that the equation is centered using a center tab stop. Be sure that the symbols in your equation have been defined before or immediately following the equation. Use “(1)”, not “Eq. (1)” or “equation (1)”, except at the beginning of a sentence: “Equation (1) is . . .”

D. Some Common Mistakes

- The word “data” is plural, not singular.
- The subscript for the permeability of vacuum μ_0 , and other common scientific constants, is zero with subscript formatting, not a lowercase letter “o”.
- In American English, commas, semi-/colons, periods, question and exclamation marks are located within quotation marks only when a complete thought or name is cited, such as a title or full quotation. When quotation marks are used, instead of a bold or italic typeface, to highlight a word or phrase, punctuation should appear outside of the quotation marks. A parenthetical phrase or statement at the end of a sentence is punctuated outside of the closing parenthesis (like this). (A parenthetical sentence is punctuated within the parentheses.)
- A graph within a graph is an “inset”, not an “insert”. The word alternatively is preferred to the word “alternately” (unless you really mean something that alternates).
- Do not use the word “essentially” to mean “approximately” or “effectively”.
- In your paper title, if the words “that uses” can accurately replace the word “using”, capitalize the “u”; if not, keep using lower-cased.
- Be aware of the different meanings of the homophones “affect” and “effect”, “complement” and “compliment”, “discreet” and “discrete”, “principal” and “principle”.
- Do not confuse “imply” and “infer”.
- The prefix “non” is not a word; it should be joined to the word it modifies, usually without a hyphen.
- There is no period after the “et” in the Latin abbreviation “et al.”.
- The abbreviation “i.e.” means “that is”, and the abbreviation “e.g.” means “for example”.

An excellent style manual for science writers is [7].

V. USING THE TEMPLATE

After the text edit has been completed, the paper is ready for the template. Duplicate the template file by using the Save As command, and use the naming convention prescribed by your conference for the name of your paper. In this newly created file, highlight all of the contents and import your prepared text file. You are now ready to style your paper; use the scroll down window on the left of the MS Word Formatting toolbar.

A. Authors and Affiliations

The template is designed so that author affiliations are not repeated each time for multiple authors of the same affiliation. Please keep your affiliations as succinct as

possible (for example, do not differentiate among departments of the same organization). This template was designed for two affiliations.

For author/s of only one affiliation (Heading 3): To change the default, adjust the template as follows.

Selection (Heading 4): Highlight all author and affiliation lines.

Change number of columns: Select the Columns icon from the MS Word Standard toolbar and then select “1 Column” from the selection palette.

Deletion: Delete the author and affiliation lines for the second affiliation.

For author/s of more than two affiliations: To change the default, adjust the template as follows.

Selection: Highlight all author and affiliation lines.

Change number of columns: Select the “Columns” icon from the MS Word Standard toolbar and then select “1 Column” from the selection palette.

Highlight author and affiliation lines of affiliation 1 and copy this selection.

Formatting: Insert one hard return immediately after the last character of the last affiliation line. Then paste down the copy of affiliation 1. Repeat as necessary for each additional affiliation.

Reassign number of columns: Place your cursor to the right of the last character of the last affiliation line of an even numbered affiliation (e.g., if there are five affiliations, place your cursor at end of fourth affiliation). Drag the cursor up to highlight all of the above author and affiliation lines. Go to Column icon and select “2 Columns”. If you have an odd number of affiliations, the final affiliation will be centered on the page; all previous will be in two columns.

B. Identify the Headings

Headings, or heads, are organizational devices that guide the reader through your paper. There are two types: component heads and text heads.

Component heads identify the different components of your paper and are not topically subordinate to each other. Examples include Acknowledgments and References and, for these, the correct style to use is “Heading 5”. Use “figure caption” for your Figure captions, and “table head” for your table title. Run-in heads, such as “Abstract”, will require you to apply a style (in this case, italic) in addition to the style provided by the drop down menu to differentiate the head from the text.

Text heads organize the topics on a relational, hierarchical basis. For example, the paper title is the primary text head because all subsequent material relates and elaborates on this one topic. If there are two or more sub-topics, the next level head (uppercase Roman numerals) should be used and, conversely, if there are not at least two sub-topics, then no subheads should be introduced. Styles named “Heading 1”, “Heading 2”, “Heading 3”, and “Heading 4” are prescribed.

C. Figures and Tables

Positioning Figures and Tables: Place figures and tables at the top and bottom of columns. Avoid placing them in the middle of columns. Large figures and tables may span across both columns. Figure captions should be below the figures; table heads should appear above the tables. Insert

figures and tables after they are cited in the text. Use the abbreviation “Fig. 1”, even at the beginning of a sentence.

TABLE I. TABLE TYPE STYLES

Table Head	Table Column Head		
	Table column subhead	Subhead	Subhead
copy	More table copy ^a		

a. Sample of a Table footnote. (Table footnote)

Figure 1. Example of a figure caption. (*figure caption*)

We suggest that you use a text box to insert a graphic (which is ideally a 300 dpi TIFF or EPS file, with all fonts embedded) because, in an MSW document, this method is somewhat more stable than directly inserting a picture.

To have non-visible rules on your frame, use the MSWord “Format” pull-down menu, select Text Box > Colors and Lines to choose No Fill and No Line.

Figure Labels: Use 8 point Times New Roman for Figure labels. Use words rather than symbols or abbreviations when writing Figure axis labels to avoid confusing the reader. As an example, write the quantity “Magnetization”, or “Magnetization, M”, not just “M”. If including units in the label, present them within parentheses. Do not label axes only with units. In the example, write “Magnetization (A/m)” or “Magnetization {A[m(1)]}”, not just “A/m”. Do not label axes with a ratio of quantities and units. For example, write “Temperature (K)”, not “Temperature/K.”

VI. CONCLUSION

A conclusion section is not required. Although a conclusion may review the main points of the paper, do not replicate the abstract as the conclusion. A conclusion might elaborate on the importance of the work or suggest applications and extensions.

APPENDIX

Appendixes should appear before the acknowledgment.

ACKNOWLEDGMENT

The preferred spelling of the word “acknowledgment” in America is without an “e” after the “g”. Avoid the stilted expression, “One of us (R. B. G.) thanks . . .” Instead, try “R. B. G. thanks”. Put sponsor acknowledgments in the unnumbered footnote on the first page.

REFERENCES

- [1] G. O. Young, “Synthetic structure of industrial plastics (Book style with paper title and editor),” in *Plastics*, 2nd ed. vol. 3, J. Peters, Ed. New York: McGraw-Hill, 1964, pp. 15–64.
- [2] W.-K. Chen, *Linear Networks and Systems* (Book style). Belmont, CA: Wadsworth, 1993, pp. 123–135.
- [3] H. Poor, *An Introduction to Signal Detection and Estimation*. New York: Springer-Verlag, 1985, ch. 4.
- [4] B. Smith, “An approach to graphs of linear forms (Unpublished work style),” unpublished.

- [5] E. H. Miller, "A note on reflector arrays (Periodical style—Accepted for publication)," *IEEE Trans. Antennas Propagat.*, to be published.
- [6] J. Wang, "Fundamentals of erbium-doped fiber amplifiers arrays (Periodical style—Submitted for publication)," *IEEE J. Quantum Electron.*, submitted for publication.
- [7] C. J. Kaufman, Rocky Mountain Research Lab., Boulder, CO, private communication, May 1995.
- [8] Y. Yorozu, M. Hirano, K. Oka, and Y. Tagawa, "Electron spectroscopy studies on magneto-optical media and plastic substrate interfaces (Translation Journals style)," *IEEE Transl. J. Magn. Jpn.*, vol. 2, Aug. 1987, pp. 740–741 [*Dig. 9th Annu. Conf. Magnetism Japan*, 1982, p. 301].
- [9] M. Young, *The Technical Writers Handbook*. Mill Valley, CA: University Science, 1989.
- [10] J. U. Duncombe, "Infrared navigation—Part I: An assessment of feasibility (Periodical style)," *IEEE Trans. Electron Devices*, vol. ED-11, pp. 34–39, Jan. 1959.
- [11] S. Chen, B. Mulgrew, and P. M. Grant, "A clustering technique for digital communications channel equalization using radial basis function networks," *IEEE Trans. Neural Networks*, vol. 4, pp. 570–578, July 1993.
- [12] R. W. Lucky, "Automatic equalization for digital communication," *Bell Syst. Tech. J.*, vol. 44, no. 4, pp. 547–588, Apr. 1965.
- [13] S. P. Bingulac, "On the compatibility of adaptive controllers (Published Conference Proceedings style)," in *Proc. 4th Annu. Allerton Conf. Circuits and Systems Theory*, New York, 1994, pp. 8–16.
- [14] G. R. Faulhaber, "Design of service systems with priority reservation," in *Conf. Rec. 1995 IEEE Int. Conf. Communications*, pp. 3–8.
- [15] W. D. Doyle, "Magnetization reversal in films with biaxial anisotropy," in *1987 Proc. INTERMAG Conf.*, pp. 2.2-1–2.2-6.
- [16] G. W. Juette and L. E. Zeffanella, "Radio noise currents in short sections on bundle conductors (Presented Conference Paper style)," presented at the IEEE Summer power Meeting, Dallas, TX, June 22–27, 1990, Paper 90 SM 690-0 PWRS.
- [17] J. G. Kreifeldt, "An analysis of surface-detected EMG as an amplitude-modulated noise," presented at the 1989 Int. Conf. Medicine and Biological Engineering, Chicago, IL.
- [18] J. Williams, "Narrow-band analyzer (Thesis or Dissertation style)," Ph.D. dissertation, Dept. Elect. Eng., Harvard Univ., Cambridge, MA, 1993.
- [19] N. Kawasaki, "Parametric study of thermal and chemical nonequilibrium nozzle flow," M.S. thesis, Dept. Electron. Eng., Osaka Univ., Osaka, Japan, 1993.
- [20] J. P. Wilkinson, "Nonlinear resonant circuit devices (Patent style)," U.S. Patent 3 624 12, July 16, 1990.

ⁱ Wictionary «æquivocal» en.wictionary.org. Downloaded from: <https://en.wiktionary.org/wiki/%C3%A6quivocal#English> (Downloaded 19.02.2024)

ⁱⁱ OPEN JOURNAL SYSTEM SERVICES «Word templates for journal articles» ojs-services.com. Downloaded from: <https://ojs-services.com/journals-publication-indexing/single-and-2-column-academic-scientific-word-templates/> (Downloaded 19.02.2024)