“Evidence-Based” is Not a Dirty Word: How to Confidently Use and Contribute to Research in Your Practice

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Activity

Find a corner that best describes your feelings about research
What brought you to this session?
What is research?

It is one way of knowing that differs from other ways of knowing

<table>
<thead>
<tr>
<th>Way of knowing</th>
<th>Strength</th>
<th>Limitations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct Experience</td>
<td>• You experience it</td>
<td>• Opportunities for direct experience are limited for any given individual</td>
</tr>
<tr>
<td>Logical Reasoning</td>
<td>• It feels reasonable</td>
<td>• Incorrect assumptions can lead to wrong conclusions</td>
</tr>
<tr>
<td>Religion and the Arts</td>
<td>• Religion and the arts connect us to one another and the past</td>
<td>• No way to verify conclusions</td>
</tr>
<tr>
<td>Experts/Authority Figures</td>
<td>• Many times experts have done the work for us</td>
<td>• Challenging their conclusions is to challenge their expertise/authority</td>
</tr>
<tr>
<td><strong>Research:</strong></td>
<td>o Not limited to any given individual</td>
<td>• Can be difficult to understand jargon and way that articles are written</td>
</tr>
<tr>
<td></td>
<td>o Tests hypotheses and assumptions</td>
<td></td>
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<tr>
<td></td>
<td>o Provides verification for conclusions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Challenges conclusions</td>
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</table>
How can I tell if an article is a credible research article?

The research
- Is from a credible source
- Is peer reviewed
- Describes sources of data
- Presents analytic techniques
- Presents limitations of the method, analytic technique and findings
How do I find research?

• **Google**
  o You can use it but will likely pay for articles
  o You might find sources that are not credible

• **Child care and early education research connections**
  o [https://www.researchconnections.org/childcare/welcome](https://www.researchconnections.org/childcare/welcome)

• **Libraries and librarians**
  o Use boolean logic
  o Try Academic Search Premier or another academic research database
  o You can use community library but will might not have access to full articles or as many peer reviewed journals

• **Call a librarian**, ask a librarian, ask a **professor** or instructor, or ask a **colleague or classmate**

• **Contact the author**
Tools and Resources

• **Going Public: Writing about Research in Everyday Language** – Although geared toward writers, this resource has a handy glossary that puts research terms into accessible language.

• **Quantitative Research Assessment Tool** – Developed by Research Connections, this tool can help readers understand quantitative articles.

• **A Policymaker’s Primer on Education Research** – These “questions to ask” exercise can help readers consider who produced the document, what was the setting, who were the participants, etc.

• **How to Read (and Understand) a Social Science Journal Article** – This breaks down parts of a journal article with a description of what it is and what it tells you. It also has a little rubric for devising a reading strategy based on what you are looking for.

• [https://www.lib.ncsu.edu/tutorials/scholarly-articles](https://www.lib.ncsu.edu/tutorials/scholarly-articles)
Anatomy of an Article:

- [https://www.lib.ncsu.edu/tutorials/scholarly-articles](https://www.lib.ncsu.edu/tutorials/scholarly-articles)
A Cognitive Model for the Representation and Acquisition of Verb Sensation Preferences

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1 Introduction

Verbs have preferences for the semantic properties of the arguments filling a particular role. For example, the verb eat can express that the object receiving its theme role will be the property of being eaten, among others. Learning such verbal preferences is an important aspect of human language acquisition and the acquired preferences have been shown to affect children's expectations about winning or upcoming arguments in language comprehension (Pinker, 1999).

Kuokkala (1999) introduced a statistical approach to learning such verb-sensational preferences. In this framework, a semantic class hierarchy is used in conjunction with a statistical model to induce a verb's sensation preferences for a particular argument position in the form of a distribution over all the classes that can occur in that position. Kuokkala's model was praised as a model of human learning of selectional preferences that made minimal experimental assumptions, it showed how such preferences could be acquired from usage data and it provided a principled learning approach. However, in and later computational models (see Section 2) have produced results that do not match with certain linguistic plausibility criteria for a child language acquisition model. All these models use the training data in "blind mode", and most of them use informative biases that ensure that only one data set is used. Therefore, it is clear that the representation of selectional preferences could be updated systematically in the models we described above. However, the assumption that children have access to a full hierarchical representation of semantic classes may be too strong. We propose an alternative view to the model in this paper which is more plausible in the context of child language acquisition.

In previous work (Kuokkala and Stevenson, 2001), we have introduced a statistical computational model of verb-sensational specialization that uses machine learning and prediction to model linguistic preferences and lexical meaning. Individual word senses are incrementally computed from a large corpus of linguistic contexts that share various semantic preferences. We have shown that our Bayesian model can incrementally acquire a generalization of the semantic roles of particular word senses, and use capture in individual word senses (Kuokkala and Stevenson, 2001). Several work focuses on associations between the semantic properties of arguments, their thematic properties, and the semantic properties preferences during the course of learning, and compare it with third-order or different argument positions, as we do in subsequent sections (Kuokkala and Stevenson, 2001). The model shows that the model can predict appropriate semantic preferences for a variety of verbs, and use these preferences to simulate human judgments of verb-sensational plausibility, using a small and highly trained set of data. The model can also use the preferences to measure verb-sensational plausibility, which can be used to validate the model's predictions.

References


Anatomy of a Research Article

• Source
• Title
• Abstract
• Introduction
• Literature Review
• Methods and data
• Results
• Discussion & conclusion
• References
Reviewing an Article
Review of Research

1. Early Care and Education Quality and Child Outcomes

2. Does Training Toddlers in Emotion Knowledge Lead to Changes in Their Prosocial and Aggressive Behavior Toward Peers at Nursery?
   • https://www.tandfonline.com/doi/full/10.1080/10409289.2016.1238674

3. Associations between structural quality aspects and process quality in Dutch early childhood education and care settings
   • https://www.sciencedirect.com/science/article/pii/S0885200615000599
# How to critique an article

<table>
<thead>
<tr>
<th>Element</th>
<th>Questions to ask</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Source</strong></td>
<td>Is the source credible?</td>
</tr>
<tr>
<td><strong>Title</strong></td>
<td>Does the title presents a concise statement of the issues investigated?</td>
</tr>
<tr>
<td><strong>Abstract</strong></td>
<td>Does the abstract describe what the article is about?</td>
</tr>
<tr>
<td></td>
<td>What topic the author is studying?</td>
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<tr>
<td></td>
<td>What the primary findings are?</td>
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<tr>
<td><strong>Introduction</strong></td>
<td>Does the introduction describe what the author plans to address in the article?</td>
</tr>
<tr>
<td></td>
<td>Does it describe why we should care about the problem/study?</td>
</tr>
<tr>
<td></td>
<td>Does it introduce how the study will contribute to the field?</td>
</tr>
<tr>
<td><strong>Literature Review</strong></td>
<td>Do the authors describe what we already know about this topic and what is left to discover? Some of the most important past findings on this topic? How have these past studies led the authors to do this particular study? How existing studies informed the framing of research questions and hypotheses?</td>
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# How to critique an article

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<tr>
<td><strong>Results</strong></td>
<td>Do the authors succinctly describe what they found? Do they present findings with adequate detail? Do the authors present tables and graphs that succinctly present findings.</td>
</tr>
<tr>
<td><strong>Discussion &amp; conclusion</strong></td>
<td>Do the authors use plain English to summarize what they found and why is it important? Do the authors describe why the findings are important? Do they describe limitations of the study do the authors identify (if any)? Do they provide suggestions for future research? Do the authors consider implications for policy and practice that are appropriately limited to the paper’s approach and findings?</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td>Are all references included and cited in a consistent format? Do authors provide persistent links if the references are downloaded?</td>
</tr>
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</table>
How can you contribute?

• Example from the field
  • UC, Irvine School of Education partnership with Orange County Head Start

• Look in your community
  • What higher education institutes are nearby?
  • What faculty work in early childhood?

• Teaching Young Children
Thank You!

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