

**Rhetorical analysis of 3 scientific lab reports**

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Psychology, though a broad discipline, aims to scientifically explain and understand human thoughts, emotions, and behaviors. Child psychology studies the emotional, social, and behavioral development of children through genetic and environmental influences. In this paper, three lab reports will be rhetorically analyzed to determine which one is the superior one in terms of the format. Lab report 1, *Behavioral Inhibition in Childhood: European Portuguese Adaptation of an Observational Measure (Lab-TAB)*, aims to understand child temperament in response to different interactive methods. Lab report 2, *In Relations between caregivers' emotion regulation strategies, parenting styles, and preschoolers' emotional competence in Chinese parenting and grandparenting*, focuses on the relationship between a caregiver's parenting style and their child's ability to regulate their emotions. Lab report 3, *"That's Not What I Heard!": Adolescent Internalizing, Negative Perceptions of Maternal Communication, and Felt Shame and Guilt*, delves into the connection between maternal communication, and their child internalizing negative feelings of guilt and shame. Through the analysis of these three articles, there will be a comprehensive understanding of why lab report 1 has superior formatting.

In *Behavioral Inhibition in Childhood: European Portuguese Adaptation of an Observational Measure (Lab-TAB)*, referred to as lab report 1, aims to determine if the Lab-TAB, an instrument that measures child temperament, is reliable to use on Portuguese-speaking children. This experiment was done by measuring and evaluating the responses of behaviorally inhibited children when interacting with unfamiliar situations. What's more, two laboratory observers watched the video recordings of the experiment and decided on a unanimous rating of the child's temperament. The results show that the data collected from the Lab-TAB is consistent with ratings from the two observers. Overall, according to the results, it is determined that the

Lab-TAB is a reliable instrument to measure child temperament in Portuguese-speaking-children (Fáisca, Ferreira, Fernandes, Gagne, & Martins, 2021).

In *Relations between caregivers' emotion regulation strategies, parenting styles, and preschoolers' emotional competence in Chinese parenting and grandparenting*, referred to as lab report 2, discussed the relationship between a caregiver's parenting style, and their child's emotional regulation competence in a culture where authoritarian parenting is common. The experiment was conducted using a questionnaire given to both parents and grandparents. This questionnaire asks its participants to detail their parenting styles and their ability to emotionally support their children. The results show that there is a direct relationship between authoritative parenting, and a caregiver's ability to positively interpret an event, along with a higher emotional competence in children (Chen Qiu, Kathy Kar-man Shum, 2021).

The lab report, *"That's Not What I Heard!": Adolescent Internalizing, Negative Perceptions of Maternal Communication, and Felt Shame and Guilt*, referred to as lab report 3, observed the correlation between the communication behaviors of a mother and child and how it contributes to a child internalizing how they feel. In the experiment, both mother and her child discussed 3 conflicts they get into the most and come to a solution. They then spoke about their side of the conflict and were asked to rate themselves using four communication behaviors. These behaviors included hostility, whining, lecturing, and warmth. The results of the experiment showed that there is a positive correlation between bad maternal communication and a teen internalizing their negative feelings (Rote, Flak, & Ellison, 2021).

The abstract is the first section of a lab report, and it should briefly summarize the main points. Lab report 1 falls short in clearly stating the objective of the experiment, leaving the reader to guess the purpose, given the extremely limited background information. What it lacks

in purpose, makes up for its brief summaries of the methods, results, and discussion. The experimental method was briefly mentioned, and the result of the experiment was clearly stated in a single sentence. While lab report 2 gets straight to the point, with the first sentence revealing the purpose of the experiment, it lacks an explanation of the experimental method, only stating who was involved and not how. Additionally, the results and conclusion were only briefly explained. In contrast, lab report 3 introduces the research problem and objective of the study. The method is explained in depth, as well as the results, giving the reader a concise and clear understanding of the content in the lab report. Overall, lab report 3 has a better abstract in terms of clarity.

A good introduction to a lab report should provide important, necessary background information for the reader to understand the purpose of the experiment. Lab report 1 includes a great deal of unnecessary background information that is not mentioned a second time outside of the introduction section. For instance, there is a paragraph dedicated to different psychological disorders, but does not include additional explanation as to why it is relevant to their research. The introduction summarizes the results of previous research done thoroughly but fails to explain why their current research is relevant to those previous studies. Additionally, the hypothesis is unclear, with only one sentence written to describe the goal of the study. Correspondingly, lab report 2 also has a plethora of background information that makes it difficult to identify the main point being made. There are 5 research questions, resulting in five hypotheses stated, which makes it difficult to focus on one thing at a time. However, it is presented in a way where each question is labeled from 1-5 with its corresponding hypothesis also labeled 1-5. Lab report 3 is formatted in a way where information can be easily read through and navigated, with bold headings to identify what the paragraphs ahead will detail. The research problem and method

used to conduct the experiment are clearly stated, allowing for a better context when reading the background information. There is no unnecessary filler information and gets straight to the point.

After the introduction, a method section is written to detail how the experiment was conducted. A good methods section should provide enough detail so that if someone were to replicate the experiment, they can do it the same way. Lab report 1 involved human subjects so, the sample size and description of the participants were given; specifically, age, gender, and education level. In the measure's subsection, there are several paragraphs explaining different tests, without a proper explanation of how or why it is relevant to the experiment. It is unclear as to how the experiment was carried out, with no specific step-by-step method. Even more than that, there is no explanation of the methods used to collect data. It simply states that they collected data using questionnaires, but not how. Lab report 2 also includes the sample size and description of who was involved in the study. Unlike lab report 1, there is a thorough explanation of what questions the questionnaires given were, as well as how data was collected. The major flaw in this report is that since there is no step-by-step procedure, it will be hard for readers to replicate. Lab report 3, similar to 1 and 2, includes a section to describe the participants involved and the sample size. What sets it apart from the other two is the thorough step by step procedure used to conduct the experiment. It includes the order in how tasks are given, as well as a thorough explanation of how data is collected. Overall, lab report 3 is the best given its detailed information.

The results of a lab report should focus on the data collected, without any interpretation of the results. In lab report 1, only two tables were given. These tables showed statistical information about the test that was given, without results that was relevant to the experiment itself. Although a lot of information is given, it is unclear what the main finding of the

experiment was. The tables were mentioned briefly, without any explanation as to what they show. Lab report 2 has a lot more tables and figures compared to report 1. While they do make mention a of their charts, they never analyzed them, making it unclear what data they are using to make certain claims. Also, the tables and figures seem to be placed in random locations, without much sense. There is no paragraph detailing what each one shows. Unlike the other two, lab report 3 immediately starts off with a summary of the key findings. Then, it is followed by a more detailed description of their data. The results are organized logically, allowing for easy reading when it comes to what each of the tables means. Evidently, lab report 3 does what 1 and 2 don't, which is thoroughly presenting their data in an organized manner.

A good discussion section of a lab report should interpret the meaning of the results, why they matter, and do they support your hypothesis. Sometimes, the conclusions of the lab report will be included in the discussion section, instead of having its own designated section. Lab report 1 has a discussion section, but no conclusion. While it does restate the objective of the report, it does not interpret the data, only describing what they did for the experiment. Furthermore, it does not describe the significance of the data collected and how it supports the hypothesis. There is a comparison to findings from previous research, as well as limitations and future research directions. Similarly, to lab report 1, lab report 2 includes a discussion section, but not a separate section for the conclusion. The discussion section immediately restates the hypothesis and summarizes its results and main findings. There is a clear understanding of the significance of their findings in relation to the research question. It also includes limitations, properly describing and explaining how certain factors may have impacted their findings. More importantly, there is a section clearly detailing the implications of their research and how their results will contribute to already existing research. Lab report 3 is the only one that includes

distinct sections for the discussion and conclusion. Within the discussion section, the hypothesis is restated and describes how their findings are significant given their research problem. There is a thorough explanation of their findings, with an additional detailed section describing the limitations and future directions of their research. Lab report 3 is also the only one with a conclusion section, summarizing the main findings and significance, as well as its importance to current and future research. Arguably, lab report 3 does a better job in terms of having a clear distinction of formatting, with separate sections detailing their discussion and concluding statements.

After a thorough analysis of each section of the three mentioned lab reports, lab report 3 is superior in every section. In terms of abstract, introduction, method, result, discussion, and conclusion, lab report 3 gives the most thorough explanations. It is to the point, without any unnecessary filler information.

## References

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