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PRESENTING YOUR RESEARCH

CHAPTER OUTLINE

Presenting Your Findings to an Audience

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Rank Your Topics
Tell a Story
Literature, Hypotheses, Methodology, and Findings
Visual Aids
Practical Tips

Applying to Conferences Publishing an Article

Relevance of the Problem
Writing Style
Study's Design
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Sample Size

Summary

WHAT WILL YOU LEARN TO DO?

1. Explain how best to present your study to an audience
2. Discuss how to apply to regional and national conferences
3. Describe how to get an article published in a peer-reviewed journal

PRESENTING YOUR FINDINGS TO AN AUDIENCE

You have done everything you can to conduct the best research study possible, but something is amiss if no one is aware of what you discovered. Presenting your study is perhaps as important as conducting it, because this is how most people will be able to understand your procedures, discuss results, offer feedback, and take your work a step further. You are probably familiar with presenting in front of your classmates by now, but your presentations have likely focused on presenting others' ideas or research results. When it comes to your own studies, you will have the exciting opportunity to tell the world about what you did, how you did it, and the contribution you made.



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Presenting our findings to an audience is our chance to bring attention to the importance of our findings. It is our tool to communicate our study to the world.

Your classmates are the first audience for your work. Although you may feel comfortable with them, you should still take their presence seriously. Envision your friendly classmates as unfamiliar academics who will ask questions, evaluate your research, and provide feedback. They are not familiar with your topic, nor have they read your report. Since they have no idea how you conducted your research, your presentation is your opportunity to describe this process in a 10- to 15-minute time frame.

Presentations are crucial in spreading the word about your work and, if done well, can open the door to additional

opportunities, such as presenting at regional or national conferences, publishing a journal article, or even pursuing related topics in your graduate work. For the moment, let us return to the topic of preparing the best presentation possible in the time allotted. How do you convert your potentially uninterested audience to one that is fully invested? How can you involve and engage them, encourage questions, and even inspire them? Since you have limited time, the details need to be thoroughly thought out.

Identify the Main Points

When you are presenting your research, think about the entire project first rather than immediately creating PowerPoint slides. Consider what this project is really about.

You will provide information about its background, the literature review, the methodology, results, and discussion points, but which of these are most important to focus on? In order to attract the audience's attention, which of these areas deserve your time and focus? Your findings may be most important, but you may also want to focus on data collection or an aspect of the analysis. Whatever your main ingredients, identify and record them. This will help clarify your central points before you begin planning your presentation.

Rank Your Topics

Three to four points will define your research. Consider how much time you want to spend on each aspect. Is one point more important than the others and therefore warrants more time? Remember that you will need to provide background information to put the study and its concepts in context. However, do not provide too many details of the literature review when you should be focusing on the study's findings. Otherwise, your audience will wait and wait and suddenly someone will start snoring in the back of the room. You must know how to manage your time, so you can quickly move through your presentation to the most exciting part of the study—the part that makes you feel interested and alive. In other words, rank your key points so that you know in advance exactly where you'll spend your time.

Tell a Story

From an early age, storytelling fascinates all of us. Our attention is naturally captured by the details of any good story. If you give people a list of statistics, they may nod and smile, but they will never be as engrossed and involved as when they hear a human-interest story. Put this tip to good use and incorporate a relevant story that captures the essence of your study. This works wonders at the beginning of the presentations, but it will grab the attention of the audience at any time.

The first time I ever presented my work, I assumed I would appear credible by opening with statistics. “Ten percent of U.S. children under 15 years old take psychiatric medication to control their behavior!” I claimed. I encountered blank stares and could sense the audience's indifference. “So what?” they were thinking, “We all take medication in a form or another, and 10% is not that high anyway.” I was puzzled as to why the audience did not seem to care about the numbers I was presenting, but I should not have been. Numbers are truly powerful, but they are not emotional and do not touch us as powerfully as true stories.

The next time I had a chance to address a large audience, I did not repeat this mistake. I told them about a 4-year-old girl who passed away while on Ritalin, a methylphenidate

prescribed to children to control their attention deficit hyperactivity disorder (ADHD)-like behaviors. A brief video of 20 seconds of the 911 call of the mother about her daughter's sudden death made all the people in the room freeze. The audience immediately responded with compassion, sadness, concern, and, most importantly, close attention to the importance of my message. I had proven that the psychiatric medications we give to children may be really dangerous. Now the statistic of U.S. children who take medications had a much more powerful effect than in my previous presentations.

I had a valid topic of study, and the audience was eager to know more about how I conducted my research. Some topics lend more drama than others, but I am certain you can find your own story to tell. You were probably attracted to your research because of a personal story or connection to the topic. You should tell that story or connection; whatever it is, you should illustrate it so that everyone who is listening can somehow relate to your story and become drawn to your topic and presentation.

ETHICAL CONSIDERATION

ACCURATE PRESENTATIONS AND ANONYMITY



Although we want the audience to gain interest in our study and sympathize with our cause, we also want to be careful about the ethical standards of research. It is our responsibility to accurately present data and not mislead the audience on our findings or study details. Clearly, we want to present our work in the best light possible and we are not violating any ethical standards if we present the same information in the most attractive way. We simply need to be extra careful to not misrepresent the information or depict an inaccurate picture of events.

Furthermore, we need to make sure that we are not harming anyone or violating anyone's privacy through our presentation. The death of the four-year-old girl using Ritalin was widely publicized in the media and was also featured in the PBS movie *Medicating Kids*. If this case had been kept away from social media because of her parents' personal wishes, it would have been a violation of their rights to make it public through a presentation. In other words, we cannot find and use personal cases that may work to draw attention from an audience, but will violate their anonymity or any other ethical agreements.

Literature, Hypotheses, Methodology, and Findings

Now that you have the audience's attention, you need to show them that you are a professional. While your story is attention-grabbing, you also need to establish that your work is professional, ethical, and thoughtful. Keep it brief, but mention what the literature offers. What do other studies say about the topic? What were some of the gaps in the literature? How did the literature drive your hypotheses and study?

Briefly state your hypotheses and the relationship you were trying to investigate. Then, be succinct about your methodology, starting with ethical considerations and safeguards to protect the anonymity of participants. Discuss how the data was collected, the number of participants, and participant demographics, including race and ethnicity, gender, religiosity, sexual orientation, and single parent versus two parent families,.

It naturally flows if you address the findings following the discussion on data collection. You will revisit the hypotheses and state whether you rejected or failed to reject the null hypothesis. Did you find something more about the relationship between the variables of interest? Was there something you missed? Did you discover something new? What were the limitations of your study? Be as professional as possible. This is the time for specific and factual descriptions, so the audience will know exactly how your study was conducted.

Visual Aids

It is not by chance that this discussion of visual aids comes at the end of the section. Visual aids are not the focus of your presentation. They are your aids and will help convey what you want the audience to learn from your study. They are not a goal in themselves, although they are powerful attention grabbers. Whether you use a short video clip, an animation, slides, or another kind of visual representation, it should fit the needs of your study. It is typically helpful to use a visual aid, but remember that what you are saying should be the focus of the presentation. If you have text on your slides, keep it to a minimum. Fewer words equal a better presentation. You would be wise to show tables, graphs, figures, or other visual illustrations of your findings rather than any words at all.

Practical Tips

The tone of your voice and your body language when you address the audience are important in making an effective presentation. When you are in front of a group of people, everyone is looking at you. It is necessary to make eye contact with them. It is not only polite, but makes for a more effective presentation. Have you ever met someone who does not look you in the eye when you talk to them? It can make you feel uncomfortable and a bit ill at ease, right? If you start looking people in the eye when you talk, it will build confidence and increase your ability to incorporate humor, tell stories, convey your research, and otherwise have a great time. If you avoid looking at your audience, you will transmit your insecurities, make everyone feel uncomfortable, and quickly lose their attention. It goes without saying that if you read your slides verbatim you are almost saying, “I have no desire to look at you, so I am reading these to you.”

Another important rule is to keep your voice in check. A calm yet strong voice, pausing as you speak, allows for two crucial things to occur: (1) it will show you are confident

about your study, and (2) it will allow you to formulate the next sentence before you speak. Rushing your presentation makes the audience jittery and inattentive; going too slow may cause them to lose track of your point. Practicing a good speed and tone of voice is the key to finding a perfect rhythm.

Humor can be engaging in a presentation, but forced humor can be disastrous, so use caution and think about whether it is right thing for your presentation or not. Dry humor or sarcasm usually works best. Be comfortable with who you are as a person before deciding on whether you would use humor in your presentation. Stand-up comedians direct a good amount of their jokes at themselves, which may work well for you too. Humor is delicate, so unless you have experience with it and feel confident using it, it needs to be treated carefully.

Finally, dress appropriately and stand up straight. Your audience wishes to feel appreciated and putting effort into your appearance is one way of saying, “I am showing you respect.” Slouching, hiding behind a podium, or touching your face or hair shows fear and insecurity. You must present the best version of yourself and if it feels uncomfortable for the first few seconds, you will see how quickly you will get accustomed to it. Some presenters are good at using their hands. Learn how to use your hands skillfully, and you will have an engaging presentation. Think about it. Dramatic people are the ones we listen to the most because they do not simply talk with their mouths, but with their entire bodies.

There is much information available on the topic of presenting. If you want to learn more about how to become an excellent presenter, see *The Art of Public Speaking* by Stephen Lucas; *Resonate: Present Visual Stories That Transform Audiences* by Nancy Duarte; and *The Naked Presenter: Delivering Powerful Presentations with or without Slides* by Garr Reynolds.

APPLYING TO CONFERENCES

When you started your first research study, you may not have considered the outcome or what to do with your findings once the work was completed. Presenting your work to your classmates is a fulfilling endeavor and helps you practice this skill. You should strive, however, to present your findings at regional or national conferences in your field. Many organizations and universities organize their own annual conferences, but it is perhaps advisable to consider applying to a smaller conference first.

Local universities will likely host conferences open to undergraduate students. Start browsing to see whether your topic fits within the focus of one such conference. Some professors create student email lists to publicize articles, conferences, local jobs, and other events. Approach your professors and ask whether you might be included in their lists or whether they have information about regional conferences where you might present. Conferences that target undergraduate research are the most beneficial because you can

present your research in front of an audience, listen to feedback, get used to answering questions, and network.

Regional conferences help to hone your presentation skills and prepare you for the next step: national conferences. A national conference is more competitive and usually only accepts poster presentations from undergraduate students. You may be thinking that presenting a poster isn't fulfilling, but, in fact, becoming familiar with researchers in your field, participating at the conference, talking to professors from various universities, and listening to other research presentations are all extremely beneficial. You may be able to add the poster presentation into your curriculum vitae.

Poster presentations are located in a separate area at prescheduled times and are very well attended. They afford an excellent opportunity to network with other students who are also invested in research, as well as professors from other universities. It is a great way to meet others who are interested in your topic. Students who are interested in pursuing graduate degrees should take advantage of this networking opportunity. Students interested in an academic career may also take advantage of the many opportunities and resources available at national conferences.



Conference presentations help us reach out to larger audiences, strengthen our communication skills, and pave the way to networking.

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RESEARCH WORKSHOP 14.1

APPLYING TO CONFERENCES



Most national and regional conferences have *calls for abstracts* that often circulate among faculty or other email lists. It may be worthwhile to explore some of these conferences, look at their websites, and become a member to receive their newsletters. This will guarantee that when the call for abstracts is open, you will receive an email notification. Nationally recognized conferences may be easy to find, but the regional ones may require more digging. If you live in an area with a few

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universities, they may be the first place to start looking. Many universities organize small conferences that provide undergraduate students in their school and adjacent schools an opportunity to present a paper or a poster. These are golden opportunities to get to know and network with others and to learn more about universities that you might attend for your graduate degree. To find these regional conferences, it may be helpful to talk to professors in your field of study. They will know what types of small conferences take place in the area and the approximate time when these calls come out.

Once you know the conference you are applying to, all you need to do is prepare your abstract. In most cases, you only need to submit an abstract for a paper or poster presentation. Keeping organized and submitting your abstract by the deadline is necessary, but submitting a high quality abstract is just as important. It may be helpful to have a professor read over your abstract and give you feedback. You need to make sure that it truly represents the poster or the paper you have prepared, that it is clear, that it has an engaging style, and that it is within the word limit indicated in the call for abstract.

Once you submit the abstract, it goes to a committee of conference organizers, who read these abstracts closely, discuss their importance, and approve or reject them. National conferences are more competitive because more people apply to them, so their deciding committees are inundated with interesting and engaging abstracts. If you apply to a national conference and are rejected, you should not become discouraged, but try again the coming year. The chances of being approved is slightly better for regional or university conferences, and they can be a good starting point if you have never applied to one before.

PUBLISHING AN ARTICLE

One of the goals of research is to make the findings available to the scientific community. Presenting at conferences is one way of doing this. Another way of reaching the scientific community is to publish your study in a journal specific to your field. Many journals are open to undergraduate students who have conducted excellent research and are willing to go the extra mile in publishing their paper. Table 14.1 shows some of the common journals available to undergraduate students from different disciplines. In addition to these journals, many universities have their own research journals dedicated to undergraduate research.

Most of the journals in this table are peer-reviewed, which indicates a higher quality of article with a sound methodology. A peer review guarantees the quality of research. For example, if you are conducting research that focuses on people who have an alcohol

Discipline	Journal, information, and website
Multidisciplinary	American Journal of Undergraduate Research is a national, peer-reviewed, multidisciplinary, independent journal that publishes four times per year. Website: http://www.ajuronline.org/
Anthropology	Anthrojournal is an open source journal in anthropology that shows mostly scholarly work of undergraduate and graduate students. Website: http://anthrojournal.com/
Exercise Science	The International Journal of Exercise Science is a peer-reviewed journal that engages undergraduate and graduate students as authors and reviewers in the area of exercise science. Website: http://digitalcommons.wku.edu/jjes/
Mathematics	Involve is a peer-reviewed journal that aims to show cutting-edge research from undergraduate and graduate students in mathematics and related disciplines. Website: http://msp.org/involve/about/journal/about.html
Sociology, Anthropology	The Journal of Undergraduate Ethnography is an online international journal focused on ethnographic research studies conducted by undergraduate students. This journal publishes two issues per year. Website: http://undergraduateethnography.org/
Social Sciences	The Journal of Integrated Social Sciences is a peer-reviewed journal dedicated to disciplines, such as political science, psychology, sociology, and gender studies. Website: http://www.jiss.org/
Multidisciplinary	The Journal of Student Research is an interdisciplinary peer-reviewed journal, entirely online and freely accessible. Website: http://www.jofsr.com/index.php/path
Biology	The Journal of Young Investigators: The Undergraduate Research Journal is a peer-reviewed journal accepting research manuscripts from various disciplines, such as biology, physics, mathematics, engineering, and psychology. Website: http://www.jyi.org/
Education	Learning and Teaching: The International Journal of Higher Education in Social Sciences is a peer-reviewed journal dedicated to teaching methods in higher education through social science lenses. Website: http://journals.berghahnbooks.com/ltss/index.php?pg=home



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Being able to publish our study and findings is more than simply an effective way to build our resumes. It shows that the strength of our study and its appeal to the research community.

dependency, you will need the opinion of experts in addition to truly understand the quality and impact of your study. Someone who is investigating cognitive development of children would likely not have the expertise to evaluate the quality of your research.

We depend on researchers who work in related areas to critique and evaluate our work. This way, the quality of a study is evaluated prior to publication. In practice, article submissions are received by the journal's editor. Keeping in mind the journal's needs and space for publication, the editor chooses

among the available articles that are the best fit and that are highly likely to succeed in the review process. Then, the article is sent to experts on the same research topic who review, critique, and make recommendations to the editor. To avoid potential biases and preferences, this process is typically anonymous. Once reviews are completed, the editor decides whether the article is suitable for publication.

There are writing standards to keep in mind when you are trying to publish your work. Start by considering what reviewers look for when they evaluate an article for publication. Hoogenboon and Manske (2012) have prepared the following list of reviewers' priorities when considering a study: (1) the relevance of the problem, (2) the writing style, (3) the study's design, (4) the quality of the literature review, and (5) the sample size. Let us take a look at each of these specific characteristics of the article.

Relevance of the Problem

Our family members may be the most intriguing, inspiring, and interesting subjects for us. We may want to conduct study after study on them. However, the world may not share our enthusiasm—they have their own family members to worry about. In other words, the focus of our study should be of interest to a broad audience. Is the study attempting to solve or offer insights on a problem that concerns our world today?

A topic that starts as a personal issue is in fact relevant to the scientific community. For example, if we were to investigate the impact of divorce on children because our own parents went through a divorce, our study will likely be relevant in today's world because of the increasing number of children in similar situations. Although it is important to find

a topic that is relevant to a lot of people—a *hot* topic—it is even more important to stay true to your own areas of passion and interest because you will produce the highest quality of research when you invest your time into something you truly love to do.

Writing Style

Writing is a learned skill. The more experience and practice you have with it, the better you will become. There are many excellent guides available about approaches to scientific writing, but the following are some simple practices to improve your writing style:

1. Read as many scientific articles and books as possible to familiarize yourself with different styles, commonly used phrases and words, and writing with clarity.
2. Write every day, even for just 15 minutes. Think of writing as a muscle in your body that needs constant exercise.
3. Think ahead about the design of the study and the presentation of your work.
4. Avoid unnecessary information and words.

Study's Design

Reviewers consider the type of methodology used and whether it is appropriate for a study. As you have repeatedly read throughout this book, the design should serve the study, not the other way around. This is what reviewers will notice. Did your design selection truly fit the study or was it guided by convenience? Were you ethical in your data collection, and what measures did you take to protect your participants' confidentiality? If you conducted interviews, how did you handle the data afterward? How did you transcribe and code your interviews? If you conducted surveys, what were the steps taken to clean and code them? How many people were involved in the analysis? What is the level of sophistication you bring to this study? Having a strong methodology with a good rationale is your protective shield in the review process. There is nothing more satisfying than a study that is accepted and praised by the scientific community.

Quality of the Literature Review

Your familiarity with the work of other researchers in the field will be apparent in your literature review section. If you have scrutinized and systematically organized the literature in your area of interest, you will understand the implications. You will know not only how many studies were conducted on the topic, but the types of methodologies used,

RESEARCH IN ACTION 14.1

ILLUSTRATION OF A PRESENTATION



Source: In the eye of the beholder: Reports of autism symptoms by Anglo and Latino mothers by Blacher, J., Cohen, S. R., and Azad, G. (2014). *Research in Autism Spectrum Disorders*, 8, 1648–1656.

The following is an excellent example of a clear, simple, and straightforward presentation of an entire study. To read the actual publication, please visit the journal *Research in Autism Spectrum Disorders*, Volume 8, and look for the title of this article. The articles subheadings are presented here, which provides a good example to follow when writing an article or paper for your study. Look at how the writers have slowly and logically presented their literature review, methodology, findings, and discussion.

Title: In the eye of the beholder: Reports of autism symptoms by Anglo and Latino mothers

INTRODUCTION

- 1.1. Cultural beliefs about child development and disability
- 1.2. Autism diagnosis and Latino children
- 1.3. Research question and hypotheses

METHODS

- 2.1. Measures
 - 2.1.1. Intake form
 - 2.1.2. Autism Diagnostic Observation Schedule
 - 2.1.3. Autism Diagnostic Interview Revised
- 2.2. Procedure
- 2.3. Data analysis

From the title, we can directly see what the article is about without reading it. We can see how this research is organized around the headings and subheadings before reading it. The introduction or the literature review seems to be logically structured. It first presents the cultural beliefs about childhood, then specifically discusses the prevalence of autism and how it is diagnosed among Latino children. At the end of the literature review, the researchers present us with their questions and hypotheses.

In the methodology section, the researchers discuss how they measured their concepts and how participants were interviewed or surveyed. We see that the researchers revised their autism diagnostic interview, which they explain in this section. There is information on how the study was conducted, and how the data was handled and analyzed.

RESULTS

- 3.1. Ethnic differences on the intake form
- 3.2. Ethnic differences on the ADI-R
- 3.3. Ethnic differences on the ADOS
- 3.4. ADOS classification and mother-report measures: differences by ethnicity

Now, we move to the results sections. The researchers discuss various ethnic differences among participants, ethnic differences in the autism diagnostic observation and the revised interview. These ethnic differences seem to appear on mothers' self-reports as well.

DISCUSSION

- 4.1. Limitations
- 4.2. Conclusions

The researchers then discuss their findings, describe the limitations of the study, and conclude their work. There are likely details we are missing without reading the actual research report, but the subheadings help us glean a good idea what this work is about. This kind of elegance and simplicity is what makes any study great, which should be your ultimate goal in reporting your work.

the demographics of the populations explored, and the theoretical perspectives adopted. You will also know the gaps in the literature and can identify the missing areas in your review. A great literature review sets the tone for a great study because the reader can see you have mastered the topic and are well-acquainted with the literature.

Sample Size

Having only a small number of participants can limit the impact of any study. If you surveyed only your classmates, for example, you would lack diversity in demographics,

such as diversity of opinion, age, education, and socioeconomic status. Your findings may not be as informative as a larger sample that includes more participants from various backgrounds.

A larger sample size results in a study with stronger validity and reliability. Therefore, it is not surprising that reviewers consider the sample size to be one of the most important characteristics of great research. Sample size is not only important for quantitative studies. It is also a characteristic to look for in qualitative research, though it will depend on the topic of the study and how difficult it is to recruit the population of interest.

Summary

Conducting the best study possible is a researcher's aim in all circumstances, but being able to present the work to the entire world requires additional skills. Being able to present your best self to an audience is something that can be learned and improved with practice. Making your work public and presenting it to an audience is necessary in today's world. Presenting in front of your classmates is just the first step that is meant to whet your appetite for attending conferences, presenting in larger audiences, and, ultimately, publishing your work in a journal.

First, after presenting to your classmates, applying to regional conferences or conferences organized by local universities in your area may be the next logical step. It will provide you insight into the audience's response to your study and also help you network. Networking with people who are interested in the same topic opens the door for future endeavors, from attending the graduate school of your choice and getting help with future research to furthering your career in a specific area. Regional conferences can be less intimidating than national conferences, although as an undergraduate you are likely to be limited to poster presentations. However, national conferences allow for a large range of opportunities, including meeting researchers and scientists in your field (i.e., people who have written articles in your literature review) and becoming familiar with universities you may want to attend for your graduate studies.

Whether you are presenting a paper or poster, there are some best practices to keep in mind. Having a simple, easy-to-follow presentation is a great benefit. Identifying the main points of your presentation and maintaining focus on these points will give the audience a good sense of the study. You have done a great job when you interest people in your topic and they ask questions to learn more. If you are presenting a paper, rank your topics in such a way that you spend most of your time on the most interesting and engaging points of your study.

Capture the attention of your audience by either telling a story, maybe using humor, or adding a personal touch to your presentation. Meanwhile, stay professional and never forget to say something about the literature review, your hypotheses, your methodology, and the findings. While visual aids work best for large audiences, they should serve the study and not the other way around. If you are using slides, make sure that your slides have the fewest words possible and you make eye contact with the audience.

Writing an article that is suitable for publication in a scientific journal is another way to make your work available to larger audiences. There are many scientific journals available to undergraduate students and having an article published by the time that you graduate with a bachelor's degree will put you in the yes pile for most graduate programs. Most of the scientific journals for undergraduate students are peer-reviewed. The peer-review process means that your study is read and critiqued anonymously by scientists who are experts in the topic of interest. Some common aspects of your study that most reviewers pay attention to are (1) the relevance of the problem, (2) the writing style, (3) the study's design, (4) the quality of the literature review, and (5) the sample size. Though being accepted for publication is a longer more rigorous procedure, it ensures that published articles are of the highest quality.

Taking a step further

- 1) What are some techniques we use to capture audiences in our presentations?
- 2) What are some ethical considerations we need to pay attention to when presenting our study to an audience?
- 3) What are some best practices in using visual aids to our advantage?
- 4) What are some important practical tips to keep in mind when applying to a journal for publication?
- 5) What makes for a high quality of literature review?
- 6) What is the relevance of your topic and what elements do you want considered when applying to a journal for publication?

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