

CSC 790: Graduate Seminar

Assignment 01

1) Why would authors like to publish their work?

The specific motivation behind the desire to publish their work widely varies among different authors but in general most authors might have some common reasonings. Among which, the biggest and most important motive is to share their story. Publishing is a very good medium to share their findings, ideas, knowledge, problem solving skills, and creativity to a wider audience. It gives them an opportunity to boast about their achievements and hard work while still contributing to the advancement of their field. It also provides a way for them to receive feedback and engage in the intellectual exchange and healthy silent competition with other scholars in their fields, building on top of each other's works.

It also helps them to establish themselves as an expert and enhance their credibility which can help them advance their career as well as get more opportunities. It might as well be a way to showcase their expertise and experience to their potential employers, collaborators and funders. It is an excellent way to build and expand their professional network. Some authors might have more personal motives as they might be obligated to publish their work in order to fulfil the publishing requirements in their contracts, to receive grants and recognition, or to advance their career to a higher position.

2) What should be the structure of the abstract?

Typically, the abstract consists of background, objectives, methods, results, and conclusion.

- Background/Objectives: A brief overview of the context of the study along with a clear statement of the purpose of the research (hypothesis).
- Methods: Description about the type of study, study design, data type and collection technique and the methods for analysis.
- Results: A summary of the key findings of the study including essential and statistically significant data.
- Conclusion: A brief statement of the interpretations of the result along with a short explanation for the hypothesis acceptance/rejection.

The abstract should have these sections in the corresponding order and should be concise. Usually, it should be written in a single paragraph, should be around 250 words or less and should clearly convey the purpose, methods, results, and conclusions of the study

with more emphasis on methods and results so that the readers can make up their mind whether the paper is of interest to him before deciding to go through it deeper. For this reason, it should mention only the data included in the paper and should absolutely be self-contained and understandable without the need to reference any other sections of the paper.

- 3) How many different types of scientific works are there? Can you provide a format of one of their types?

Typically, there are nine different types of scientific works.

- Original article: Provides new information based on original research and is supported by in-depth statistical analysis with conclusions supported by the data provided in the result.
- Case report: Usually short and focused description of a single case with unique features which may consists of previously unreported observations, unique diagnostic methods, or previously unreported clinical conditions, treatments, or complications of a recognized disease.
- Technical note: Description of a specific technique, modification of an existing technique, or new equipment applicable to a branch of medicine with limited number of figures and references.
- Pictorial essay: Article that relies on the images to convey the current and practical messages. It contains very limited text and references, and does not introduce any new information, hence, used for teaching/explaining purposes.
- Review: Detailed analysis of recent developments on a specific topic highlighting only important points that have been reported in previous works without introducing any new information or author's opinions.
- Commentary: Short article not intended to provide any new information but describes the author's personal experience and perspectives of a specific topic and outlines the various viewpoints that exists.
- Editorial: Short articles invited or written by the editor that may contain short review or critique of the original article, description of subjects that draw attention to very recent innovations or subjects of general interest.

- Letter to the editor: Short articles on any subject of interest to the journal reader, including objective and constructive comments on previously-published articles.
- Others: Various other types of articles depending on the mission and style of individual journals. Examples include, historical articles, works-in-progress articles, special reports, evidence-based practices etc.

Different scientific journals may have different structure requirements but the basic format of an original article follows the following order.

- i. Title: Concise and descriptive title that accurately describes the paper.
- ii. Abstract: Summary of background, objectives, methods, results, and conclusion.
- iii. Introduction: Description of research problem background, literature review, and problem hypothesis.
- iv. Methods: Detailed description of study design, sample size, data collection and analysis methods used.
- v. Results: Discussion of key findings, including tables, figures and results from in-depth statistical analysis.
- vi. Discussion: Interpretation of the results, their implications and limitations along with the comparison with previous research.
- vii. Conclusion: Summary of the main findings and recommendations for future research.
- viii. References: Correctly formatted list of references cited in the paper using a specific referencing style.
- ix. Appendices: Supplementary materials such as raw data, figures and additional calculations if necessary.

4) How do you decide the quality of the paper? Enumerate important criteria.

The quality of the paper can be determined by finding the quality of the scientific experiment and the quality of the presentation of the work done. Several important criteria can be used to evaluate the quality of a research paper.

- Writing: A research paper should be concise and clear enough for even an average individual to grasp so that it will reach a wider audience. It should also be well-

written and free of errors.

- **Relevance:** A research paper should address important and timely research question.
- **Originality:** The research paper should provide a new information, new technique, or summation of existing information with new perspective so that it can make a significant contribution to the existing knowledge.
- **Methodology:** The paper should have conducted appropriate research design, and methods of data collection and analysis.
- **Results:** The findings in the paper should be accurate, clearly reported and supported by solid evidence.
- **References:** A good research paper should have proper citations of good quality existing relevant research works so that the research topic and work can also be of top-most quality as it will be based on existing best works. The references should be comprehensive and not just for the sake of including a list of references.
- **Impact:** The research paper should at least push the boundary of the field slightly. A good quality research will have a significant impact and the potential to influence even future research works.