

DOI: 10.21802/gmj.2019.1.11

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Student's Research Activity

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«Researcher's thinking way is a way to progress and the sole way to progress are doubts and curiosity»

Tempus Mumeena

Abstract. Breakthrough technologies and fast development in the informational basis in medicine put on finding different sources for well-timed reception of necessary information in order to keep pace with achievements in medicine (journals, conferences, and webinars). Such demand can be often met only after individual studying, researching necessary information. Each student must be proficient in methods of research activity. In higher educational institutions of Ukraine students are taught to approach search and usage of scientific and practical research projects methodologically in their training.

Objective. To teach students formulate hypotheses, collect and evaluate critical data for problem solving, writing of a research project.

Keywords: *research project, skill, research.*

University education focuses on students' end results and depends directly on their responsible approach to the education. Methods of approaching results remain flexible enough; the main thing is to determine clearly what you want to achieve, to get from students.

Research project is not only collecting, searching and saving information, but also prognosis of possible results in using of these matters. Such research gives us understanding and explanation of new matter, shows the way into getting knowledge (from Greek *meta* (indicate) and *odos* (way), and from Latin *scientia* (knowledge) – way to knowledge).

Research activity skill gives students an opportunity:

- to develop professional approach to scientific skills, population health.
- to develop research skills and evaluate their necessity.
- to search information and collect evidences that apply to research problems.
- to observe, evaluate information and bind it with research problems.
- to introduce common terms and methods used in medical statistics, and to combine existing knowledge in using of main statistical data and methods of information presentation.
- to observe, determine and evaluate conclusions of research.
- to inform colleagues, tutors and wide audience about the process and results.
- to develop pedagogical skills that can be used in all fields.

Leading specialists in writing of research works offered some "frame", a structure of research writing. This structure includes some stages and has a name "Research Cycle Diagram" (Fig. 1).

Before starting to write research project, it is necessary to decide upon a problem itself, what exactly and why to observe, how to observe, why to research? The research problem is formed by different factors, e.g.:

1) a physician as a clinician is interested in information on clinical problem;

2) a physician as a researcher is interested in verification of a new hypothesis; in improvement or evaluation of already existing procedures;

3) a physician as a tutor is interested in teaching, lecturing, writing of reviews.

It often occurs that during search of necessary information, a researcher gets answers to put questions and there is no need to continue the research. But if it does not happen, so the next stage is formulating of hypothesis and stating of research methods. The hypothesis is an assumption, a try at explanation a researched event. After the researcher decided upon a problem of their work, they need to think out all possible methods for confirmation or negation of their hypotheses. For example, a hypothesis that students perceive information better, when they have 5-min breaks each 10 min of the class. Hypothesis proving is done on a selected group of students that have 5-minute breaks each 10 min, whereas another control group does not rest so often, only 5 min each 45 min of the class. The hypothesis was falsified, so far as an age group of selected students was 18-20 years and connection between frequent rest and perception of information was not confirmed, it depended more on students' kind and temper.

As one sees in the example, a student has to collect received results and perform their analysis after use of research methods. This can be both quantitative, and qualitative scientific and interpretative approach.

Each research project is finished with summarizing the received results and making main conclusions:

- analysis of received results;
- evaluation, if a stated aim were accomplished (if had gotten an answer to stated research problem);
- which part have received results for a scientist?

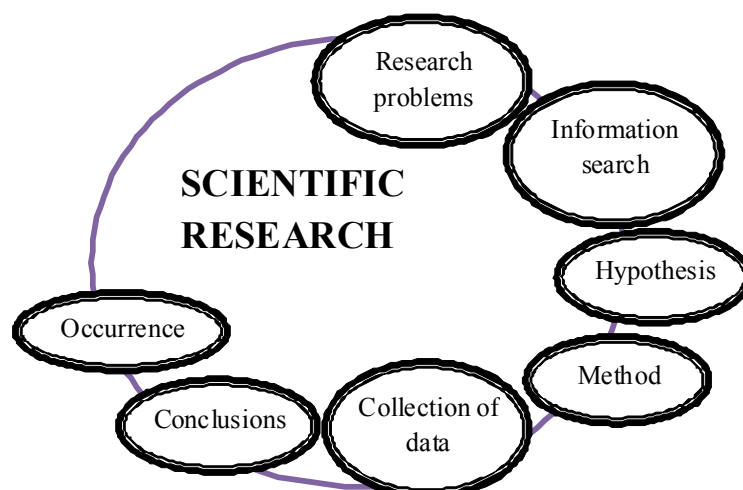


Fig. 1. Research Cycle Diagram

- where exactly and by whom can the received knowledge be used after the research?

If during writing references and description of the received results, we had used additional informational sources, so we definitely must list them in the end of our research project as references.

Conclusion

Such practical skill in 5-6-year students of medical university develops clinical and scientific thinking and invites to search a better (more perfect, informative, effective) way of disease diagnosing or treatment.

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Студентська науково-дослідна робота

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Резюме. Революційні технології та швидкий розвиток в інформаційній базі медицини спонукають до знаходження різних ресурсів для своєчасного отримання необхідної інформації, щоб іти в ногу з досягненнями в медицині (журнали, конференції, вебінари). Така потреба часто може бути задоволеною тільки після проведення індивідуального вивчення, дослідження необхідної інформації. Кожен студент зобов'язаний володіти методикою навички наукової роботи. У вищих навчальних закладах України студентів навчають методологічно підходити до пошуку та використання у своїй професійній підготовці наукових та практичних дослідницьких проектів.

Мета: навчити студентів формулювати гіпотези, збирати та критично оцінювати дані для вирішення проблем – написання науково-дослідної роботи.

Ключові слова: науково-дослідна робота, навичка, дослідження.

Received: 04.03.2019

Revised: 18.03.2019

Accepted: 24.03.2019