

The Neutrosophic Research Method in Scientific and Humanistic Fields

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The Neutrosophic Research Method is a generalization of Hegel's dialectic, and suggests that scientific and humanistic research will progress via studying not only the *opposite ideas* but the *neutral ideas* related to them as well in order to have a bigger picture of the whole problem to solve.

We have qualitative research methods and quantitative research methods.

In a way we do research in social science, in another way in biology and anatomy, or in physics and mathematics, or in psychology, etc.

Two types of scientific research methods are: descriptive (analysis) and experimental (testing).

1) Analysis:

Make a plan of research: What to find out? What tools are needed? What procedure to follow? Observation and formulation of the problem to solve. What other people did before? Analyze the data and draw conclusions. What is your hypothesis? What evidence supports it? How many variables (unknowns) are in your research? What is the interaction between them (the correlational coefficient can be positive, negative, or no relation between variables)? There are dependent and independent variable – be able to distinguish these categories. Measure your variable. Get help from others (your future co-authors) if parts of the topic is outside of your deep knowledge. Do a survey. Design a guide. Split the big problem into small problems in order to check each of them. Don't be bias, or at least reduce it as much as possible. Try to be more objective than subjective. Don't be guided by interest, but by the scientific or humanistic truth. Inquire yourself and others. Use modern logics (fuzzy logic, neutrosophic logic, paraconsistent logic) for prediction. Avoid misconceptions.

2) Testing:

How to test your results? How to interpret the results? How to connect them with other researches? Collect data from your experiment and control. Communicate it to other experts in your field and ask their opinions. Your experiment has to be repeatable, i.e. if somebody else reproduces it he or she should get the same result as yours.

3) Re-Testing:

After experiment and control, you check again your hypothesis, theory. Analyze the resulted data and repeat the experiment. Do statistics on your repeated trials. Look for patterns. What is the reliability of your test? Do you get a valid result (i.e. is your result in contradiction with classically confirmed results)? Educate others about your method of research and your experimental result. When sharing your new idea, expect that some people may be opposed (because of common intellectual... inertia) to new concepts, so don't get discouraged (see, for example, how Quantum Physics is so... strange). If your hypothesis is right (valid), this might lead you to develop it into a law or new theory. Or, you might try to disprove a hypothesis (called null-hypothesis).

4) **Study the opposite ideas.**

Why those ideas are in contradiction with yours? What conditions apply for your ideas and for those opposed to yours? Can your hypothesis be true in some conditions and the opposite ideas be true in other conditions? What is the explanation for this contradiction?

5) **Study the neutral theories.**

This point makes the difference between dialectics and neutrosophy. A neutral idea (which neither opposes nor asserts your hypothesis) could influence you in generalizing your hypothesis in a larger scientific space. Or, can give a new impulse to interconnect your hypothesis with others that apparently have no connections.

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