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Practice of Science

Grinnell makes a pretty convincing case that the things scientists do as they pursue their research are much more interesting and exciting then the dry descriptions of the final results that make it into research articles and textbooks. Grinnell would agree that finding the proof is much more interesting and exciting then simply writing it down. Others would disagree and say its boring and or writing down the proof is more exciting and interesting. From this, research articles and textbooks come into play. The scientists and mathematicians figure out the proof and then are displayed in research articles and textbooks for all to see. This is where they get their credit. From here, statistics are used to credit the source even more. They are used to show the proof and the information they are using through the studies. Scientists and mathematicians are more important on the “discovery” side of things.

There is a difference between finding a proof and writing it down. Grinnell would say finding a proof is much harder then simply writing it down. He would also say that “the steps in finding the proof are much more interesting and exciting then writing them down,” as stated in the question. I would have to agree with Grinnell and his statement. There are many steps a scientist or mathematician has to take in order to get the right results, conclusions or theories. This could be a short process, taking days to weeks to find out, or it can take months to years and years of research to figure out the conclusions. This is the fun part of figuring out proofs. You come to roadblocks where you have to take different routes in figuring out your conclusions, which often leads to new discoveries, or you can come to a dead end where the proof cannot be proved. Some of the discoveries save our lives, while some are pointless and do us no good. Grinnell would say that all discoveries are worth something and lead to other discoveries. Scientists or mathematicians, often never come to a conclusion and waste years in their life trying to figure out the proof. Grinnell would say it was a worthwhile experience and the work they have to far could help other scientists or mathematicians come to their conclusions and lead to new discoveries. Proofs live off of other proofs, meaning where one proof is left off, another mathematician or scientist can take over their notes and makes a new proof that’s easier and simpler then the first proof. If proofs were just as easy as writing them down then no scientist or mathematician would do them because its too easy, not fun, and not a learning experience.

Other people would not agree with Grinnell’s statement, “steps in finding the proof are much more interesting and exciting then writing them down.” They would say that its too time consuming and not worth the study. They would also say its not interesting or exciting finding proofs. Others could also say that writing down the proof is more exciting and interesting then figuring out the proof. This is because it shows that all their work has paid off and they have the conclusion set in stone, for others to read throughout the world, through textbooks and magazines. They get a high off of their accomplishments. The working leading to the conclusion of the proof could be very boring too. There are good reasons why there should be such difference. To some people the steps in finding a proof are more exciting then writing them down. To others, simply writing them down is more exciting then finding the proof. It all depends on the person doing the proof and getting the credit for it.

I do believe there is a distinction to be made between what research articles look like and what textbooks should really look like. Research articles are more interesting then textbook texts. They contain more exciting information and cut out the useless text that the textbooks contain and are more in-depth of the research. They concentrate on the research being done and not what’s going on around it. Research articles are also used in a different purpose. They are more useful for research then textbooks, since they have been researching a topic for a long period of time and more up to date. Textbooks include all the facts. They contain pages and pages of text that aren’t that important. Textbooks are also not always up to date with information, and sometimes cannot be credited. Anyone can write in a textbook, while certain people can be in research studies. A lot of the texts in textbooks are from scientists and mathematicians from long periods ago. Research is being done constantly to improve technology and cure diseases.

Statistics should be included with textbooks more so then research articles, but some statistics show up in research articles. Statistics are used to show a trend or percentile. They also include graphs and research studies. They show the reader examples and follow the research so the reader has a better understanding of the problem. The research studies should be part of the research articles more so then the textbooks. This is because in research studies you have to figure out the different scenarios. For example if its double-blind, whose receiving a placebo and whose receiving the actual drug and what the cofounding variable would be.

The use of statistics and the scientist finding their proofs should be included on the “discovery” side of things. This is because they take time, days to years, to figure out the proof. They are the ones who discovered the proof and the creditors are the ones who then credit their work and make sure it’s correct, or make it in a simpler form. The scientists or mathematicians take the world and study it, discovering new ideas and theories, “ the circle of discovery-learning new things.”(Everyday practice of Science, 4) The credibility side includes the research community who makes sure the idea and theories are accurate. For the theories, they try to prove they are correct through research,” circle of credibility-trying to convince others that the new findings are correct.” (Everyday Practice of Science, 5)

Grinnell makes a clear statement that scientists enjoy figuring out the proofs rather then writing them down. Everything in math and science is connected in one shape or form. Research articles and textbooks are quite different. Grinnell says that anybody can write in a textbook, where certain people can write in research articles. Statistics fits into the whole picture. It’s used in everyday science, through research studies to finding proofs to finding math and science equations. Lastly, statistics and proofs seem to fit into the “discovery” side of things. Proofs are discovered then creditors credit them and put them into textbooks.