#30 What mistakes do we make when working with product analytics? Part 1/3

Team   Analytics

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#63 Curse of knowledge, #72 Consensus bias

We do not take into account the different professional levels (qualifications) of our colleagues in the team. As a result, we do not get the professional opinion we want, and accidentally impose our opinion on colleagues. This is a very common problem that is massively ignored by teams. To solve it, from the very beginning we should fix the basic criteria and values we operate with. Data analysis should be started only after these criteria have been discussed and accepted by all team members.

#74 Dunning-Kruger effect

We used inaccurate data that incompetent project participants prepared. This problem becomes even more relevant if several different teams prepared the data that we are analyzing. Because people under the Dunning-Kruger effect cannot understand their incompetence, they often speak as confidently and convincingly as their competent colleagues (**#69 Overconfidence effect**). From time to time we could conduct additional data reviews, and show them to random team members to double-check.

#29 Observer-expectancy effect

Our huge interest in a particular result leads to the fact that we unconsciously manipulate the data/course of the experiment.

#34 Clustering Illusion, #42 Illusory correlation

We find correlations in random data, interpreting them as causal. We begin to consider random events less random depending on how well the "data tells the story." (**#38 The illusion of validity, #40 Gambler's fallacy**).

#67 Planning fallacy

We have not correctly estimated the amount of time required for data collection. Perhaps we started evaluating the data before the actual completion of the marketing campaign.

#35 Insensitivity to sample size

Our sample size was not large enough to extrapolate the conclusions to the entire group.

#41 Hot hand fallacy

In decision-making, we are guided by our success, which was largely the result of chance. We believe that we can repeat/surpass this result.

#44 Fundamental attribution error

We do not correctly assess the causes of the events. We attribute successful events to our merits while blaming the unsuccessful ones on the "outside world" and market conditions.

#30 What mistakes do we make when working with product analytics? Part 2/3

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#48 Authority bias
In our decisions, we overestimate the importance of the opinion of an authority figure.

#49 Automation bias
We rely too heavily on data received from the system without checking its reliability (calculation mechanisms, etc.).

#36 Neglect of probability
We ignored the unlikely events, assuming they would not happen and would not affect the data. Because of this mistake, many colleagues must cross-check any analytical data.

#68 Pro-innovation bias
Perhaps we have come up with a data analysis method that is unique for our product/company. At first, it seemed that the method was very effective, but later we stopped noticing distortions in the data resulting from its use.

#59 Survival bias
We were wrong in our conclusions because we analyzed the results from only one of several categories. In fact, the data we did not receive from other categories distorted our understanding of the situation as a whole.

#76 Illusion of control
We overestimated our ability to impact events. As a result, the variables we use in the analysis formulas are beyond our control (but it seems otherwise).

#66 Hindsight bias
We consider the events that have already taken place to be more predictable than they are. Based on this, we make the wrong decisions to assess the competence of our team. For example, we can reprimand one of our colleagues because s/he did not notice something "obvious," whereas it was not obvious at that moment.

#96 Conjunction fallacy
When analyzing the data, we "tied" several events together as "most likely" without noticing that the overall likelihood decreases with each new event's addition.

#10 Omission bias
We postpone the obvious decisions that we know we have to make, and underestimate the risks of our inaction. We look for "additional information" when everything is already clear (**#94 Information bias**).

#30 What mistakes do we make when working with product analytics? Part 3/3

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#11 Base rate fallacy
We take reports emotionally because of their wording.

#70 Social desirability bias
If the collected data resulted from a survey, then we have to ensure that the respondents' answers were real.

#25 Confirmation bias
We looked for confirmation of some hypotheses, unconsciously ignoring all the data that proves them wrong.

#26 Congruence bias
We took into account only the data that was the result of our direct actions. We did not consider the events that occurred without our participation, but they had an impact on the result.

#30 Ostrich effect
We unconsciously avoid data that may not prove our hypotheses.

#45 Stereotype
We ignore the existing stereotypes and analyze the data too "politically correct." As a result, we create a situation in which team members cannot express what they think.

#33 Bias blind spot
We believe that everything written above does not concern us directly, since "We are confident in full control over our actions, we understand everything, and biases cannot concern us."

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In conclusion, I will add that a person who analyzes data and makes decisions should not allow negative emotions to affect them (**#55 Positivity effect**). This is a very important skill for any manager.