The paper proposes a new model of explaining knowledge graphs in the real world. While previous model, Preferential Attachment model, considers the node metrics to calculate possibility of adding a new fact, their model adds a new parameter to more focus on the relationships between entities.

I have to note that I am not the expert on the studies of knowledge graphs, thus my comments focus on improving the readability of the paper. Overall, I enjoyed reading the manuscript, but I felt some parts were a bit confusing. I would like to ask several clarifications.

In the manuscript, the authors emphasize the difference of a new model from the conventional Preferential Attachment model. In "Ablation study" section, the authors showed their model mostly outperforms the conventional model. However, they did not explain "how" it improved the model. It might be better to visualize the edge weight distribution of two models and a real network (like Figure1) to show the characteristics of the new model.

I recommend to add a list of each parameter with a brief explanation (a table, for example) to aid readers to understand.

It might be a naïve question, but I was wondering why the authors named "the probability of adding a new entity in the graph when a relationship must be enriched with an additional entity" as "superficiality". Superficiality refers to the fact that something is unimportant and superficial, which I though it does not match with the meaning of the notion you added in the model. Would you explain why you used this term?

Minor comments
p3. "a relationship must be enriched…".
"Created" or "established" instead of "enriched"?
I think enrich is used like "enrich a network", but not to a single edge (relationship).

p6. “ChEMBL”. Although it is explained in the method, please briefly explain what it is or make a citation as this term appears for the first time on this page.