**Diachronic collaboration yields adaptive problem solving** (*Pierce Edmiston*)

General comments:

There are no references to other related research, if this is normal for a proposal of this nature then ignore this comment, otherwise consider adding a suitable number of references to support what’s said in the proposal.

You could consider that diachronic may be a more effective approach for some individuals, whereas synchronic may be more effective for others. Is there a way to investigate this, perhaps by correlating performance on the experimental tasks with scores on personality tests / questionnaires etc? Just thinking that industry (and the funding bodies they fund) would be interested in this as could help to identify more effective working styles for their employees

I’d consider avoiding the past tense as the experiments have not been run yet. I’ve outlined a few examples of the past tense below but I’d suggest checking the proposal in case I missed some.

Perhaps consider outlining a rough estimate of how many participants might need to take part in each experiment (simply to show that the experiments are plausible).

Introduction:

The end of the first paragraph (‘My hypothesis is that organizing teamwork diachronically will make teams more effective at utilizing feedback to solve problems, also known as adaptive problem solving’) puts forward a hypothesis that is key to the proposal, but I don’t think it gets at the whole proposal. I’d consider re-phrasing it so that it’s more neutral / balanced, such as something along the lines of:

‘The general idea proposed here is that the outcome of organizing teamwork diachronically will benefit under those conditions in which feedback can be utilized effectively to solve problems. This is known as adaptive problem solving.’

Or another approach would be to state that the goal of the experiments outlined here is to investigate under which conditions diachronic or synchronic performance is superior.

You could consider adding a sentence at the end of paragraph 2 that really gets the reader enthusiastic about the ‘bigger picture’, e.g.,

“…..than accounting for the ingenuity of individuals. This has substantial implications for our understanding of the way that societies and technologies develop and the way that we can facilitate effective development in the future. This is highly relevant in an increasingly competitive globalized world.”

Experiment 1:

Consider putting Figure 1 earlier and referring the reader to it so that they can understand the difference between diachronic and synchronic collaboration before outlining the procedure.

The explanation for the hypothesis that diachronic collaboration may be superior is presented at the very end of the outline of Exp 1. The reader consequently has to read the outline of this experiment without understanding how this hypothesis was formed. Consider outlining the hypothesis, i.e., the relationship between feedback and submission rate (the last paragraph in exp 1) earlier in exp 1, perhaps even before the Procedure. This should help the reader understand how the experimental procedure and design relates to the hypothesis.

Experiment 2:

Paragraph 1, line 6 reads ‘team members’ = ‘team member’s’

Paragraph 1: ‘If diachronic teams are already using feedback to incrementally improve team performance, enforcing feedback should only help synchronic teams by encouraging them to focus on incremental improvements in team performance.’

Last paragraph: ‘ If the reason synchronic teams are outperformed by diachronic teams is that they aren’t utilizing feedback as effectively, enforcing feedback so that team performance must improve through all changes to the team’s solution should improve synchronic team performance more than diachronic team performance’

Experiment 3:

Figure 3 caption:

‘Experiment 2 included two other feedback conditions’.

Consider revising this to: ‘Experiment 2 *includes* two other feedback conditions’

(i.e., avoid past tense).

In the PDF version Figures 2 and 3 come immediately after each other but the html version is the way to go (the figures are separated by text).

The figure between figures 3 & 4 needs a title and description.

I think I get the ‘Draw my data’ contest but a longer description about it would be helpful to a reader unfamiliar with this.

Experiment 4:

I’m not totally clear about the procedure of this experiment. I think more detail is needed in describing how the procedure differs across the two conditions and this could be specified in both the procedure and Figure 4’s caption, i.e., for the figure explain that the different colors correspond to a different person (is this right?) and the different shapes are different tasks (is this right?).

Paragraph 1:

Past tense: ‘In Experiment 1, synchronic teams completed their task in 2 calendar hours, where diachronic teams required 8’.

Title:

It looks like the title refers to your hypothesis stated at the end of the first paragraph. As you don’t yet have the data to back up ‘Diachronic collaboration yields adaptive problem solving’, I’m thinking that a more neutral title could be better, e.g.,

‘Contrasting the effectiveness of diachronic and synchronic collaboration for adaptive problem solving’’