**Product’s name:** Khan Academy Mathematics  
**Grade ranges evaluated:** Grades 1-2, 3-5, 6-8, 9-10  
**Date of evaluation:** Evaluated by the Tulna team, February 2021  

**Product Context and Roadmap:**

Recent years have witnessed an exponential growth in the number of EdTech products and services in the education landscape, including India. This growth is driven by a strong belief in the transformative potential of technology in education. However, there has been very little work in the direction of getting evidence of effectiveness and impact of these programmes and for most of the products we don’t know whether they are actually helping our students learn? Lack of meaningful information on product design and pedagogy, effective implementation models and evidence of impact on learning leave teachers and users doubtful about adoption of the right set of tools. If there is evidence of impact in small pockets - “what is working well”, “what is the best indicator or predictor of success”, “how it can be amplified at a scale”- is the information worth knowing and sharing for the transformation. If it did not work - “what failed- theory of change or implementation” is again crucial information to redesign product and/or redesign to transform education. A growing body of research indicates the impact that Khan Academy’s personalized mastery learning has on driving learning outcomes.

In upcoming years, our focus and strategy would be:

- **Localisation and adoption** - One of the significant barriers in usefulness of EdTech is the lack of content in regional languages. Khan academy is at present available in 6 different Indian languages. We are in process to build sites for more languages, with support of the willing and committed State partners. Tamil, Malayalam, Telugu, and Bangla seem to be the next set of target languages.

- **Strengthening science offering** - Our essential courses will help learners (and enable educators) by providing a very strong foundation in the fundamental concepts using deep conceptual videos for conceptual understanding, and focused practice that allow learners to retrieve the concepts learned, make mistakes, get feedback, and in the process master the skills. The big idea is that when learners get a strong understanding of the basics (backbone) - the essentials - they can learn more nuances, more details, more applications (the branches) themselves, using their textbooks, schools, notes, and other resources.

- **Impact studies in Indian Scenario** - We have promising preliminary evidence of impact (medium to large effect sizes in the range of +0.08 SD to +0.42 SD) on learning outcomes from in-house correlational studies conducted during 2018-19 in pilot schools of 2 Govt partners and 2 Private schools. Ongoing implementation studies and rigorous quasi-experimental/experimental studies with external standardised outcome measures would help identifying best predictors of learning achievement and use these insights to scale quality usage and deliver on outcomes. Khan Academy is built on a robust Theory of Change (ToC) which describes how the intervention impacts outcomes. A simplified graphical representation of ToC may be found below (Figure 1).
ToC has been validated over a period of time, and it guides design related decisions as well as all research (and evaluation) studies.