**Project DEFY : Design Education For Yourself**

* Abhijit Sinha

I started Project DEFY in 2014, in a small village called **Banjarapalya** in the southern outskirts of Bangalore. I began with a small space and a few laptops and a good Internet connection, having the local children come and play games. Together with the children, we started putting in some old broken things that the children collected from their homes, some electronic components and a few hand tools; slowly turning it into a **makerspace**, building little robots and artsy things. Eventually even older people started joining us. In the past one year, we have had over a **100** participants, ranging in age from **7 to 55**, from the local, and a few surrounding, villages. All of these participants have been using the space to learn out of interest, on their own time, in a completely customized way of learning.

The space works in a rather simple way. We begin with introducing the participants to the Internet as a book of interesting projects that can be found on different websites such as instructables, makezine etc., incrementally increasing the number of choices one is presented with, until finally everyone is free and open on the Internet, among millions of choices and capable of making these choices without getting lost. Soon participants develop certain interests, and start finding their own direction wherein they are able to find projects and initially copy them; then modifying them, until eventually they are developing more of their own ideas than what they see on the Internet. At this point, Internet is just a reference for bridging the knowledge gaps, that may exist in the peer-group learning at the space.

The space leverages two types of knowledge sources – **Internal**/community (made out of the participants of the space, as a peer-group sharing ideas) and **External**/global (from the Internet and the larger global community that are not physically close). This mix of internal and external knowledge creates a wholesome learning environment, where the internal knowledge makes sure that the local community needs are looked after, while the external knowledge makes sure that the knowledge gaps can be filled when necessary, such as solving local problems through solutions that exist in other communities.

All learning in the space is done through building projects and referencing the internet, thereby producing a **pure hands-on practical** experience. The Internet and the equipment in the space are simply tools or concrete details. The deeper idea is that we aim at **de-institutionalizing education**, and bringing it to the **hands of the people** themselves, so they can customize according to their needs. Since, December 2014, the space has been run by the rural participants it themselves completely, where each participant is learning and building each day.

Each project is made open-sourced and published on instructables by the participants themselves, open to public feedback and criticism/appraise. We do not provide certificates or marks, as we believe that one should be able to learn and define one's own learning to one's satisfaction. Global feedback helps the participants to receive many perceptions of their work, and suggestions for betterment, thereby **removing the requirement of examinations and assessments**. Since learning happens through self-interest, the **need for a traditional teacher does not exist**.

Project DEFY is now growing and bringing this concept of self-defined learning to more places and to the world in general. We are not interested in building hundreds and thousands of makerspaces or schools, but in helping communities to develop their own schools. Since, developing such a space and running it is extremely cheap and cost efficient (we spent 500 USD on developing the space and spend 500 USD every month on running expenses), we feel that this idea can be highly scalable.

The educational system in India is broken. Of course there are a few good schools, but the majority of our population is going through Government schools that have been proven to be inadequate, due to many reasons such as teacher absenteeism, wrote-learning sufficiency, lack of accountability, etc. (see James Tooley's research compiled in a book called “The beautiful Tree”). Most of those forced to use the Government schools are in the Indian villages, where no alternatives are available. This rural population forms a majority of our population and it is disheartening and disturbing to see that majority Indian youth are forced through sub-standard learning. We **do not** want to repair this broken system, we want to create a **new one** where people are in-charge of their learning and are not restricted by what is offered at the Government schools, thereby giving everyone an equal opportunity in life.

Important links:

1. Banjarapalya Makerspace video: https://www.youtube.com/watch?v=GMEbYZiGz\_8
2. Banjarapalya Participants Video for MIT Fab11 Crowd-funding: <https://www.youtube.com/watch?v=3fCsE9Ms_HM>
3. Learnings from this experiment: https://www.linkedin.com/pulse/learning-without-[teachers-maker-model-rural-india-megha-bhagat](https://www.linkedin.com/pulse/learning-without-teachers-maker-model-rural-india-megha-bhagat)
4. Photos from the Makerspace: <https://drive.google.com/folderview?id=0BywSbTJYy6V-fjZjS3pMTmFtc1cwT21mUEJOZloxSGJNMFVOM2VPcldxWTM4S05keDhaSk0&usp=sharing>
5. Projects: <http://www.instructables.com/id/E4D-banjarapalya-Makerspace/>
6. Facebook page : <https://www.facebook.com/e4dio?fref=ts&ref=br_tf>

Media articles:

1. Hackaday article: <http://hackaday.com/2016/01/19/hacking-education-a-makerspace-experiment/>
2. The Better India cover: http://www.thebetterindia.com/46008/schools-without-teachers-project-defy-bengaluru-banjarapalya/
3. Bangalore mirror cover: <http://www.bangaloremirror.com/bangalore/others/Where-children-Defy-odds-to-make-a-future/articleshow/50798652.cms>
4. The Logical Indian: <http://thelogicalindian.com/story-feed/awareness/a-school-where-there-are-no-teachers-and-you-have-freedom-to-choose-what-to-study/>
5. Citizen Matters : <http://bangalore.citizenmatters.in/articles/makerspaces-project-defy-in-bengaluru>
6. YourStory : <http://social.yourstory.com/2016/04/maker-school-karnataka-banjarapalya-project-defy/>
7. http://www.telegraphindia.com/1160313/jsp/graphiti/story\_74013.jsp

**Note**: Education For Development (E4D) was our old name, which is replaced by Project DEFY.

