Back to Basics with 6 Bricks: develop working memory, perceptual, speaking and listening skills

Johannesburg, South Africa

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Year Founded: 2013
Organization type: hybrid
Project Stage: Growth
Website: http://www.handsontech.co.za
Facebook: https://www.facebook.com/HandsOnTech

- Boys' development
- Early childhood development
- Girls' development
- Play

Project Summary

Elevator Pitch

**Concise Summary: Help us pitch this solution! Provide an explanation within 3-4 short sentences.**

Learning should take place through construction rather than instruction.
Hands on activities to develop working memory, perceptual, speaking and listening skills.
Tactile tools to stimulate and encourage learners, and that allow children to become more inventive, curious and creative.

**WHAT IF - Inspiration: Write one sentence that describes a way that your project dares to ask, "WHAT IF?"**

What if 6 bricks was all we needed to ensure that perceptual skills were developed?

About Project

**Problem: What problem is this project trying to address?**

Children from less advantaged backgrounds often don't interact with appropriate concrete manipulatives which may affect their perceptual, pre-numeracy and pre-literacy development. This project attempts to give all children the same opportunity to develop these essential skills.

**Solution: What is the proposed solution? Please be specific!**

The solution entails providing all children with 6 DUPLO bricks to do short daily exercises with. Teachers would need some basic training on how to facilitate the process. Some basic activities will be provided to teachers, but many more options (we have already developed over 250) will be made available as open source content on the web. Teachers will also be able to add their ideas - and a world-wide competition for activities with 6 bricks will be launched.

Impact: How does it Work
Example: Walk us through a specific example(s) of how this solution makes a difference; include its primary activities.

"Children must master the language of things before they can master the language of words." — Frederich Froebel

Children need time and the opportunity to play with and discover concepts. This is far more effective if achieved through manipulation of concrete objects. If presented with opportunities to practice this, there is a good chance that the foundations for effective reasoning, literacy, numeracy and perceptual skills will be developed resulting in a much better chance for life-long learning.

Impact: What is the impact of the work to date? Also describe the projected future impact for the coming years.

There are not many teachers who have been using the approach over an extended period, but the few that have, report many positive changes. The most notable being the improvement in working memory. The impact is seen in the ability of the child to more accurately listen to instructions, complete tasks, and the acceleration of conceptualisation. Teachers like the fact that they do not have to find a place in the curriculum to do the activities. They soon see how easy it is to come up with some of their own ideas and we have already had numerous of these fed back to us. We are often told that it is the children who remind the teachers about the daily exercises, reinforcing the belief that repetition at this level is so important and often forgotten. Teachers have also noted that after working with the activities the children seem to be more inventive, curious and creative.

Spread Strategies: Moving forward, what are the main strategies for scaling impact?

If children need to build their own understanding of the real world, we need to have concrete tools readily available for them to do this. Too often in classrooms we pack these tools away in cupboards. The intention with "6 Bricks" is to have them permanently available - that is to keep them out and on the desk of every child. This allows teachers to very quickly do some of the daily "6 Brick" activities, but also allows for conceptualisation use in all content areas. Because the idea is cost effective, simple to understand, train and implement, it is also easily scalable.

Sustainability

Financial Sustainability Plan: What is this solution’s plan to ensure financial sustainability?

The LEGO Foundation have decided to develop, fund & support this idea and make all the activities (over 250) available online for free. A set of 6 bricks cost R50 - affordable to most communities / pvt schools. The LEGO Foundation have also committed to supporting communities and schools who can't afford this (5 countries to start with). New idea is to get schools who can afford the sets to purchase an extra set for schools who cannot.

Marketplace: Who else is addressing the problem outlined here? How does the proposed project differ from these approaches?

This idea is different in a number of ways:
1. concrete tools remain permanently on the children's desks
2. the tools can be used for a minimum of 4 years
3. the activities don't have to fit into a curriculum - they are 5 to 15 min daily activities that address so many different learning areas
4. training of teachers requires very little effort and time
5. parents can run the same program at home to assist their kids
6. great tool to engage parents / grand parents / care-givers

Team

Founding Story

After running a 5 year project around play in 25 schools in a township, it was clear that a much simpler / cost effective solution was required to assist with building the foundations for life-long learning. During most visits to schools it was evident that the effort required to provide all children access to concrete tools was an issue. Teachers either had to send kids to collect them from other classes, a secure room, or open cupboards and boxes in order to distribute. This effort was often the factor that determined whether the teacher would use the tools or not. The Aha moment was realising that if each child had their own, the concrete tools would not have to leave the child's desk.

Team

Hands On Tech Staff: (5 teachers & 1 engineer)(5 full & 1 part time) Brent Hutcheson - partnerships / projects / admin / finance / training Philip Haas - logistics / distribution / stock / orders / training Nancy Frank, Linda Smith, Danie Heymans & Evah Mabena - content development / training / project management / charity boxes / World Robot Olympiad / school visits

Organization:
Hands On Technologies

About You

First Name
Brent

Last Name
Hutcheson

Twitter URL

https://www.facebook.com/HandsOnTechnologies
Organization Name

Hands On Technologies

How long has your organization been operating?

Project

Organization Country

, Johannesburg

Country where this project is creating social impact

, Johannesburg

What awards or honors has the project received?

Funding: How is your project financially supported?

Friends and family, Individuals, Foundations, NGOs, Businesses, Regional government, National government, Customers.

Supplemental

Awards

2013 - Gauteng Department of Education - Service Excellence Award
Tanzanite Award - Best Regional Project

Primary Target Age Group

1.5 - 3, 3 - 5, 6 - 12.

Your role in Education

Teacher.

Please specify which of the following best applies:

I am applying on behalf of a particular program or initiative.

The type of school(s) your solution is affiliated with (if applicable)

Public (tuition-free), Private (tuition-based), Home-School, Other.

Intervention Focus

Childcare, Curricular, Community, Parenting.

Does your project utilize any of the innovative design principles below?

Actively Designing Space & Culture as Essential Elements for Learning: Creating cost-effective methods to infuse a school with habits, language, and materials needed for learning through play.

Is your project targeted at solving any of the following key barriers?

Whole child development is undervalued: Essential parts of development get left behind as children get older, such as healthy habits, executive function, and social and emotional learning.

Need

Will need local training partners - ECD and Schools

Offer

What key learning outcomes does your work seek to improve?

- assist children with perceptual skill development
- activities to develop pre-numeracy & pre-literacy skills
- assist children with language, vocabulary & oral development
- assist children with social & emotional development
- assist teachers to develop skills through play
- allow teachers to incorporate creativity and curiosity in their lessons
- provide daily activities that enhance skills through repetition

Secondary Form

PROGRAM DESIGN CLARITY: We are hungry to know more about what exactly your model consists of. Please succinctly list a) what main activities are you doing with your beneficiaries, b) where you carry out the activities? c) how often? d) for how many hours? e) who delivers the services? and f) any other brief details

Testing in a few schools in SA and 5 other countries currently for :

Implement/Test/Research the model in 200 schools throughout SA - Jan 2105

Teachers do daily exercises with learners (Gr R - 3 ) - 10 - 15 mins / day

Teachers trained and visited by a trainer
INSPIRATION: What do you consider the most important trends or evidence that inspire you to believe the world is ready to Re-imagine Learning? Please elaborate.

Modern technology makes moving towards 2 dimensional learning very easy and although often thought of as quicker and more beneficial, many studies are now highlighting the problems associated with neglecting tactile stimulation and use of manipulatives in the perceptual development of children. Learning to learn has to be the focus if we hope to re-imagine learning. To launch anything - you need a solid foundation!

Children learn best when they are encouraged to explore, interact, create, and play (Thompkins, 1991).

LEARNING THROUGH PLAY: What does “learning through play” mean to you and why it is a must-have, instead of a nice to have?

Jean Piaget said, “Play is the answer to the question: How does anything new ever come about?” Play is the “work” of children. Through play, they build the foundation for later learning as they solve problems and increase their understanding of themselves, others and the world around them. Concrete material (6 bricks) is essential to their concept development, and educators need to give children time to explore and develop their ideas by creating something with their hands – hands on learning. Actively constructing things in the physical world, helps to build knowledge in the mind.

SUSTAINABILITY: Please list a quick breakdown of your funding, indicating the percentage that comes from each source.

LEGO Foundation wants rights to test/research/grow/further development the "6 Brick" initiative. Have now committed to 25 Million Rand to do this world wide over the next 5 years. Starting in SA in Jan 2015. Private schools purchase the bricks - no need for funding.

MODEL: How does your mission relate to your business model (i.e. Non-profit, for-profit or hybrid)?

The idea with "6 Bricks" is to get these tools into the hands of those who need it at no cost or at a minimal cost. With the aid of the LEGO Foundation and their commitment for the next 5 years, this is going to be possible and fits perfectly with our Non-profit model.

FUNDING PRIORITIES: If your organization were given $20K in unrestricted funding today, how would you use it? Why?

We strongly believe that investment in initiatives that promote the development of strong learning foundations is key. We would use the full amount to get tactile tools (6 Bricks) into the hands of as many under-served children as possible. [ ± 250 schools incl. training and materials ]

PARTNERSHIPS: Tell us about your partnerships that enhance your approach.

Partnerships are very important and we put a lot of work into developing the ones we have to enhance our initiatives. We work with a number of partners - teachers/heads of schools/parents/governing bodies/Unions/Dept. of Education/tertiary institutions/funders ( foundations and corporates ) and other NGOs. You achieve so much more - working together.

COLLABORATIONS: Have you considered or initiated partnerships with any of the other Challenge Pacesetters? If so, please share.

Not at this stage. Have been too busy working on and developing our final product. But this something we would definitely like to do as soon as we are in a position to do so. We have noticed some other ECD projects that have similar objectives and we would like to connect with them.

VISION: If you had unlimited funding, and you could fast forward 15 years to when your program has been able to achieve wild success - what will it have achieved?

Every school in the world would have a set of manipulatives that remain permanently on the desks of all children. Children would be able to use these to build their understanding of concepts and the world in which they live.

More learning in classrooms would take place through play and sensory-motor input with far less instruction from the teacher.

IMPACT - KEY METRICS: Please list the key data points that you would cite as evidence that you are able to achieve lasting learning outcomes. Please also share one data point for which you most hope to see better results over time

- more children able to read
- children able to express themselves verbally/graphically/emotionally
- teachers who encourage children to seek and work out solutions
- teachers who understand the power of play
- lessons where children manipulate tactile tools to find the answers

DP : In SA we'd want to see a dramatic improvement in both numeracy and literacy ANA results at Grade 3 level.

IMPACT - REPORTING SAMPLE: Please attach any examples of your impact reporting. [optional]:

RESEARCH AND EVIDENCE: Please link or attach any research or evidence resource you are open to sharing more widely [optional]. Building research and evidence is a key aim of this initiative, and the resources you share may be chosen for listing in the Center for Education Innovations library:

SOURCE: If applicable - who created the research or evidence you are choosing to share?

IMPACT - REACH: How many people did your project directly engage in programmatic activities in the last year?

1,001 to 10,000

STUDY: Has an external evaluation or study been conducted of your organization?

Yes

Other (please specify)

Number of Employees:

Fewer than 10

Number of Volunteers:

Fewer than 10

APPROACHES: Given the complexity of play, it is not surprising that there have been numerous research attempts to categorize the different types and approaches! Please indicate which of the following your project focuses on.
| Physical Play, Play with Objects, Symbolic Play, Games with Rules, Providing a Range of Opportunities (providing the equipment and materials needed for various types of play), Educational Structuring (developing playful projects within educational contexts), Adults Participating (Ensuring adults are able to play alongside children), Challenging Play (play that disrupts - where rules are disregarded and levels of imagination are high). |
| Other (please specify) |
| AFFILIATION: Please specify if your organization has any existing affiliations with the LEGO Group. |
| Yes - we have affiliations with LEGO Education and the LEGO Foundation |

Source URL: https://www.changemakers.com/play2learn/entries/back-basics-6-bricks