

MEXUS: ADDING STRATEGIC PERSPECTIVE TO EDUCATION AND TRAINING

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Abstract “To raise new questions, new possibilities, to regard old question from a new angle, requires a creative imagination and marks real advances in science.”

Albert Einstein

In business, New Product Development (NPD) is the term used to describe the complete process of bringing a new product or service to market. There are two parallel paths involved in the NPD process: one involves the idea generation, product design, and detail engineering; the other involves market research and marketing analysis. NPD is the company's monolithic process, which seek in finding the right combination of the safe bets for the prospective growth of the organization. Knowledge has triggered many a growth in this process but in itself has been left aside to be fit for the Gen-next. Thus education sector needs to re-look itself and see its strategic fit in the coming years.

A case study on Mexus Education Pvt Ltd who has the whole world of education weaved around the simplicity and curiosity to make education the way of life. Education that is derived from the life experiences, from something that is adventurous, enjoyable and fun rather than compulsive. The study is intended to bring across a company who integrated the interactive technology with innovative designing to give what an individual customer is looking forward in Learning.

Keywords: New Product Development, Business Model, Education, Integrated Communication Technology

INTRODUCTION

“Any sustainable business finds a strategic fit in the global arena not by sowing a seed or planting a tree, but by creating a forest of opportunity and new paths less trodden.”

Kunal Sharma, Director Mexus

The idea to develop a new product comes from a sense of business opportunities, which demands growth as well as sustainability. The development of new products is the most important factor in sustaining the success once achieved. The emphasis on development of new products has spurred researchers from strategic management, engineering, marketing, and other disciplines to study the process of new product development. Most conclude that in order to be successful at new product development a firm must simultaneously meet two critical objectives:

1. Maximizing the fit with customer needs and
2. Minimizing time to market.

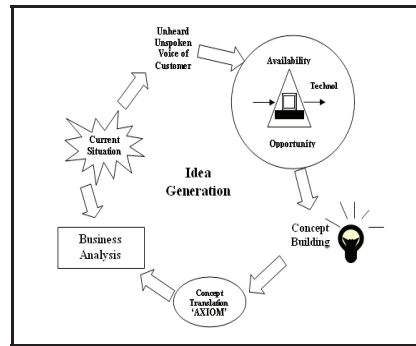
While these objectives often pose conflicting demands on the firm, there is a growing body of evidence that the firm

may employ strategies to successfully meet both of these objectives. Successful firms are those that articulate their strategic intent and map their Research and Development (R&D) portfolio to find a fit between their new product development goals and their current resources and competencies.

For every strategies of sustainability it roots to innovation. The term product innovation is taken to mean different things to different individuals for instance some may believe that it depicts a product and/or service that is first of its kind in any given market. Innovation is considered an important part of any business venture. Product innovation is important because when people innovate, they bring about or create a product and/ or service that are new to the business world or that which the world has never set eyes upon (Dag, 2009). Hence Cooper and Edgett (2008) defined new product development (NPD) productivity as output divided by input: the formula as mentioned by them is

$$\text{NPD Productivity} = \frac{\text{Sales (Profit) from the NPD}}{\text{R\& D spending}}$$

Figure 1: Framework of the study: Axiom to Mexus



Trazof (2007) has identified two basic objectives in order to recover investment in NPD and make an economic return in an environment characterized by rapid product obsolescence and market fragmentation: 1) minimize time-to-market and 2) maximize the fit between customer requirements and product characteristics. A work by Nagahira, A and others in 513 Japanese manufacturing units has found out that - first, the more market uncertainty and technical uncertainties are reduced during the front end, the higher will be the effectiveness of NPD projects. Second, the more intensively new projects are planned prior to the start of development, the more both market and technical uncertainties are reduced. Finally, in industry goods firms, it is easy for managers to develop initial planning, which has a greater impact on reduction of market uncertainty compared to consumer goods firms. In contrast, as it is very difficult for managers in consumer goods firms to develop an initial plan, managers involve several function members within their project team, and often bring in external resources to reduce market

How to do NPD? It been explained by Khurana and Rosenthal (1998) as:

- product strategy formulation and communication,
- opportunity identification and assessment,
- idea generation,
- product definition,
- project planning, and
- executive reviews.

STUDY DESIGN

The technological intervention in the recent times has created a paradigm where new avenues have been created and industries are replenished with new orientation. Knowledge is depicted as power and the organization are trying to have a synergy produced in tying it up with education. This technology enabled education attains the objective of making education a fun learning process in opposite to the cumbersome way of traditional learning. A very noteworthy point is that at a single moment one can reach a larger

number of learners and train them and also reduce the cost. So, as the world evolves ICT (Integrated Communication Technology)-enabled education is becoming the need of the hour.

A futuristic thinking Group like Bilakhia Group (estb. 1986) thought ahead and laid the foundations of Axiom Education and the organization was renamed to Mexus Education Pvt. Ltd. The whole idea was to bring technology in the education and to make Learning: Fun

Figure 1 shows the framework of the exploratory study. Front end activities include idea generation, concept building, concept translation, business analysis and evaluation. These stages incorporate the uncertainty involved in the market. Cooper (2008) too, divides the fuzzy front end into four phases from idea generation, initial screening, and preliminary evaluation to concept evaluation and stresses the importance of both market-related and technical activities. Khurana and Rosenthal (1998) define the front end “to include product strategy formulation and communication, opportunity identification and assessment, idea generation, product definition, project planning, and executive reviews”. In contrast to them, the work focuses on project-related activities and excludes strategic aspects from our study. In the point of view, during the product development process information is gathered to reduce uncertainty, whereby uncertainty is defined as the difference between the amount of information required to perform a particular task, and the amount of information already possessed by the organization. It has been assumed, that the more uncertainty about the market and technology is reduced during the front end, the lower deviations from front end specifications during the following project execution phase and the higher the product development success.

IDEA GENERATION

The genesis of this idea was in the identification of the abyss that has been established between the requirement of today’s generation and the fallacy of the traditional education system. The education served the purpose of just providing

the amassed knowledge and not the applied knowledge. It creates an atmosphere of high level of stress and unhealthy competition of the numbers. A big question arises whether they are really the indicative of a true learner. Many times this is not true. Thus we have seen the Gen. Y getting burn out at a very early stage, divulging into drug addiction, and stressful depression. Thus the most important factor of enjoy ability is being ruled out from the education which has reduced the efficiency of the whole system.

In today's global business environment, the sustainability of any entrepreneur is in creating a forest rather than in planting a tree. It is the vastness of education itself is the genesis of Mexus.

Three major factors led to the development of Mexus.

1. The personal satisfaction (apart from financial and entrepreneurial benefits) associated with imparting education to children.
2. In India educational entrepreneurship is in its nascent stage. Either it can be defunct and or there is a huge opportunity associated with it. Mexus could sense the opportunity associated with education.
3. The exposure obtained from involvement in teaching IT led to the serenity.

The evolution process started from the intangibility of the educational entrepreneurship. A year was required for the PSL. A product which is complimenting the present education system was evolved. Workshops involving chalk and talk, videos, power point presentation etc. aimed at complementing the ideas of students in Science and Mathematics were conducted in many schools. Contrary to the common belief, they were fondly accepted by many schools in Mumbai. The success of the product and the subsequent demand were very much satisfactory.

The fact that the workshops complementing the existing system were only peripheral and were not making any tangible impacts in the development of students, prompted Mexus to target directly to the main stream education itself.

Many studies were conducted, models were analyzed and methods were experimented. An observation was that, over the past one century, there was little change in the teaching methods, which remained in the traditional chalk and talk way. But during this period, there were tremendous advancements in technologies. Now the question is how these technologies can be customized to address the problems in improving the teaching methods. Some constructive educational models are already been developed. One basic aspect of all constructive methods is that, time required is directly proportional to the constructively. Unfortunately, in our system, time is always deficient. This is where technology can compliment.

It is estimated that, about 20-30% time of teacher is being spent in repeating the same topics. Repetitive teachings

and concepts which can be taught without teacher can be replaced by fascinating teaching aids developed with help of technologies.

The requirement of the hour is coming together of these strange bedfellows for providing a better service to the consumer who is still not aware and who still not realizes its real want. But this concept gave rise to the existence of Mexus Education Pvt. Ltd. which is the party of the Bilakhia group. The group started in 1986. Mexus came into being in 2003. It is an extraordinary vision of the first generation entrepreneurs. Three young dynamic personalities are the passionate founding member which has the energy to bring the sea change in the way the education is perceived.

CONCEPT BUILDING

Every child looks at the surrounding objects, shapes, and color with pure fascination. It is only when they grow up, that the basic understanding of those simple shapes gives rise to comprehension of much more complex concepts and even the intricacies of language. It is a simple premise- the brain processes the simpler data first, Mexus philosophy and work started revolving around the basic premise. As 21st century children, parents and educators, one would like to see a knowledge-enriching ambience which should be interactive and user-friendly. It should empower an educator to effectively communicate in the language of the student and it should engage a student by arousing interest.

With this thought as a point and using the ingenious new age technology as the tool, Mexus embarked on a mission of creating an ever expanding circle of innovative and cutting-edge solution for education that are accessible and affordable to all. This directed them to see future which could now be translated in a product with these objectives behind:

- For students, is engaging and entertaining more than compulsive
- For educators, is detailed in feedback and ways of improvement
- For parents, is indicative of the will and choice of the child.

It should be a space where educator, students, and parents share a symbiotic relationship. The whole idea was to compliment curriculum with host of fascinating motion films, graphic books, games and innovating performance analysis system. Education should serve as the context and entertainment should forms the context.

CONCEPT TRANSLATION: VIA TECHNOLOGY, CONTENT, AND METHODOLOGY

"Technology has made great inroads in every sphere. But it is still finding its ways in education"

Saurabh Saxena- Mexus Director

Driven by consumer demand and fueled by technology advances, the education system is required to give it whole rethinking, products to reach the consumer faster – if they hope to remain competitive and sustain profitable growth. . The consumer is made to realize the importance of its need and the service being provided in tune with the need. From Axiom to Mexus was a journey where the whole idea to bring technology into education was a reinventing process. Started with Axiom and leading to Mexus was a deliberate attempt to make education friendly to students and learn the concepts in different and viable way.

To meet its objective there had to be a great synergistic effect between the content that was to be taught, the latest technology which was at the easy reach ability of the consumer, and the opportunity of the growth that was to be provided to the people .

It uses as its strategic partner technology that has come a long way in opening to the world a gateway to large amount of information anywhere, anyplace and anytime. However it is a misnomer that having information is equivalent to being educated. It is equivalent to being literate but to be educated one needs to be able to apply the information in the challenging situation to have a certain positive outcome.

New product development must be managed as a balanced portfolio of projects at different stages of development. Four types of development projects are commonly appear: Pure R&D, Breakthrough, Platform and Derivate project. Over time technology is being migrated through these different projects. At Mexus, R&D projects are the precursor to commercial development and are to develop cutting edge strategic technologies. Breakthrough projects involve development of products that incorporate revolutionary new product and process technologies. Platform projects typically offer fundamental improvement in the cost, quality and performance of a technology over preceding generations and finally derivate project involves incremental changes in products and processes. Mexus identified their desired mix of products on a project map and then allocated resources accordingly. Thus the key sustainable element in this innovative arena became the Technology. The need of the hour was now, how to utilize the technology in building and delivering the content.

Content was purposive draft taking care of multi-sensory elements. Multiple file format combinations, such as image and text, image and sound, or image, text and sound are being experimented. Retrieval of multimedia documents formerly was divided into the categories of image and text, and image and sound. While standard retrieval process begins from text only, methods are developing that allow the retrieval process to be accomplished simultaneously using text and image. Although image processing for feature extraction and text

processing for term extractions are well understood. For image and text analysis, two techniques are used: the Lorenz Information Measurement and the Word Code. A new process named Jeong's Transform is demonstrated for extraction of text and image features, The type of multimedia document determines the form of analysis for knowledge architecture design and retrieval methods.

Methodology was different combinations of text, image and, sound as per the curriculum, that were made available to the collaborators (ie, students, parents and educators) in the form of motion films, comic books, animation, 3D models etc., creating a platform which prompts learning with fun, but it was soon realized that it was a mere passive platform and the scopes remained very limited. It was now the task to deliver the content in such a way that retention is enhanced so much so the clarity in translating the concept, thus combination of online simulations and activities such as online curriculum guides, online meetings and group works etc. were put across to makes it more interactive. Hands-on activities and games derived from online simulations make the collaborators active participants in the whole process. The entire learning process becomes more enjoyable and that was the purpose this concept came into being. The task was to offer world's first complete audio-visual curriculum along with teaching tools in the form of mind maps, case studies and additional graphics.

Learning takes a new dimension. Every chapter in the text book is a film. Each film weaves a story around educational content. The content is engaging and thought provoking from a socio-cultural perspective. The settings are tailor made to broaden the perspective of a child in the real world. It is a great way to initiate class room discussions and generate active participation from each child. Learning Management System (LMS) integrates an exhaustive set of books, reference papers and sites, games and assessment which make an ideal tool for teachers.

Each chapter in the LMS is complete with reinforcements of concepts and teaching aides in the form of animations, mind maps and presentations. It also integrates a unique assessment and feedback methodology.

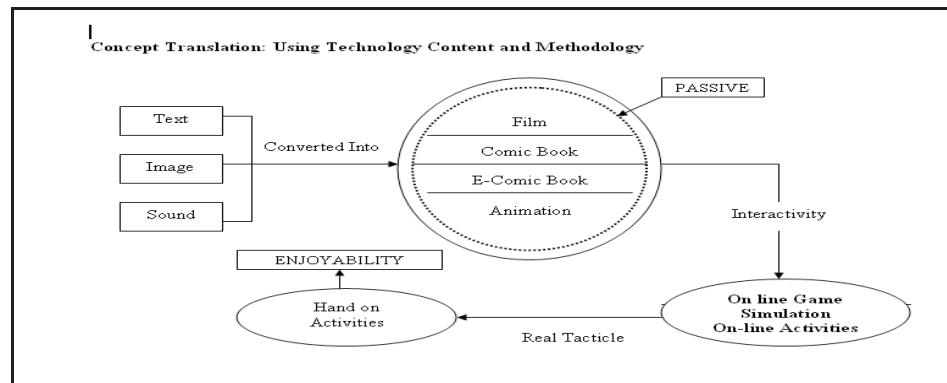
BUSINESS ANALYSIS: THE TEAM

“Creativity at its best... Technology that handles the rest!”

– Saurabh Saxena- Mexus Director

A range of team members- engineers, educators, creative writers, technical content developers, and a full production unit works 24X7 to provide the unparalleled innovation and the quality in the education solutions. Thus its birth saw a coming together of education and student engaged

- by the beauty of design ,

Figure 2: Concept Translation: Technology, Content, and Methodology

- by the thrill of story,
- by the fun of doing.

The analysis is based on the belief that the 21st century children, parent, and educator would like to see a knowledge enriching ambience which is interactive and user friendly, giving the empowerment to the educator to communicate in the language of the student.

The Team	Key Functions
Content development	Content Writers Creative Writers
Technical Stream	Product Development Portal Development
Module Development	Braingym Café Ken
Marketing	Sales Management Brand Management On-line Marketing
Finance and HR	
Trainee	Engineering Management

Team performance is mapped by following criteria:

1. Time of Completion
2. Creativity level
3. Deliverable
4. Product acceptance

Team looks into media releases, newsletters, intranet releases, website updates and other stakeholder communication material

Arrange for DEECD to review the Communications Plan and communication protocols

- liaise with the AEWG on community issues in conjunction with the PCG
- nominate representatives to attend community work with the AEWG to:

- develop and issue communication material
- coordinate internal and external stakeholder communications
- coordinate communications interfaces of the approvals, design, construction, commissioning and facilities management with stakeholders
- monitor and respond to issues with quick turnaround.

BUSINESS ANALYSIS: THE TOOL

Learning management system has a plethora of teaching tools and references arranged in a systematic manner which a teacher can have an access to, anytime, anywhere. LMS integrates an exhaustive set of books, reference papers and sites, games and assessment which make an ideal tool for teachers. It is a virtual library which has structured data for the curriculum. Each tool is a collaboration of several cutting edge software and hardware tools in order to revolutionize classroom learning. Various tools like KenRS, which make assessment of students easy and feedback to be provided, enabled the teachers to assess students more precisely. It allows them to use several references in a classroom other than books to make learning elaborate and interactive. It can also enable student participation in the teaching process.

BUSINESS ANALYSIS: THE PRODUCTS

Learning is a lifetime experience. Education is much beyond schooling; it is having an insatiable appetite for knowledge and an unyielding quest to learn through observation, experience, and experimentations. Seeing the huge opportunity available, Mexus came into the being to tap the sphere; some being in test marketing stage* and some has reached to commercialization stage. Mexus products have a wide range which enables collaborative learning which is highly individualized, flexible and accessible anytime, anywhere. Each product integrates innovative assessment and feedback system that assist in improvement and

recognition of strength and weakness. Mexus offers a fusion of entertainment with education and keep the student's will and choice at the center of all learning processes. To enhance the learning experience each product range facilitates collaborative learning and self-analysis.

Compulsive education is seldom lasting. Mexus product makes use of vibrant and entertaining content, interactive technology, an innovatively designed learning management system (LMS) and a unique assessment and feedback mechanism to make classroom the best place on earth for the child. Continuous assessment and detailed feedback are the most important factors to achieve improvement. Assessment and feedback form the backbone of improvement. Technology helps to achieve a continuous flow of assessment. A personal system for each student (KenRS) enables the teacher to incorporate assessment at every step of the teaching process. This unique feedback mechanism developed by Mexus, helps teachers to create a database of learning preference, strength and relative weakness of every student. This can help educators and parents to recognize the needs of every individual student and provide them in improvement resource.

IKEN: The Idea: The online circle of knowledge

Concept Building: It is the future of schooling - virtual schooling: www.iken.in

Concept Translations: This classroom offers an all inclusive and exhaustive resource which will be a significant supplement to a student's study. Its works on the principle of facebook concept where:

IKEN Connect

Connecting with peers, virtual mentors and enhance your circle of knowledge.

IKEN Learn

Learn through content which is a reflection of the choice that every student wishes and demands for.

IKEN Test

Test your knowledge; receive constructive feedback which is fast, accurate and personalized.

IKEN Play

Playing a good game can educate more than a classroom. Experience it yourself.

KEN Class: The Idea: Technology to deliver knowledge.

Concept Building: Ken Class is a representation of educational content with the most the visually appealing media - films.

Concept Translation: Compulsive education is seldom lasting. Ken Class makes use of vibrant and entertaining

content, interactive technology, an innovatively designed learning management system (LMS) and a unique assessment and feedback mechanism to make classroom the best place on earth for the child.

Ken Class empowers the teachers to engage the child.

1. Content
2. Technology
3. Learning Management System - A teacher's complete knowledge resource
4. Assessment and Feedback

KENX: The Idea: Creativity on Demand.

Concept Building: Imagination and original ideas for creating tangible educational solutions

Concept Translation: It was an attempt to help the clients to make any of their efforts in education enjoyable, engaging and everlasting. Within the space of education Mexus help the clients overcome the traditional notions and methods so that they can contribute towards bringing a positive change to this education system.

KENVAS: The Idea: Textbooks are fun.

Concept Building: To provide learning through graphic novels

Concept Translation: Kenvas offers students graphic novels which are fun to read. Kenvas imparts educational content in a way that is both enjoyable and everlasting. It provides parents and teachers an option to allow their children time for leisure reading - as much as possible. Kenvas gives students a break from the rigorous curriculum and makes reading fun again. These books are filled with interesting characters, stories, graphics, and practical examples to understand the concepts.

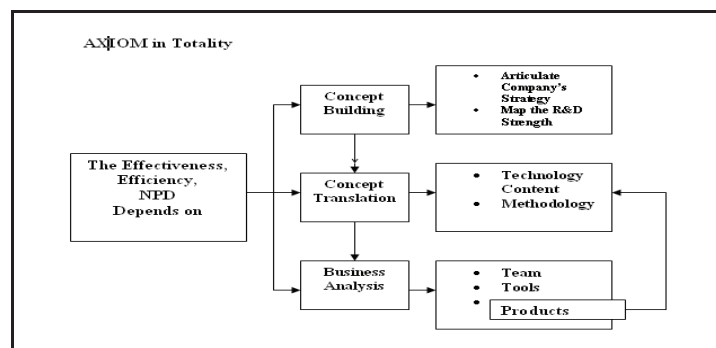
CAFE KEN: The idea: The knowledge super mart!

Concept Building: Cafe-Ken to be a virtual place where learners can lounge and learn.

Concept Translation: Cafe-Ken is a knowledge super mart which uses infinite web shelf space to merchandize a vast array of innovative educational products and services. The store also provides an extension to Mexus's philosophy of knowledge being a tangible indicator of wealth. Trading in Cafe-Ken happens in Ken - the knowledge currency. Students learn, innovate and share their knowledge and hone their enterprising skills.

Games: One of the most engaging formats to pass time, games can now help you learn a lot of things as well. Imagine NFS to teach you speed / velocity / acceleration or better still, the age old game of Monopoly to make you understand investments. The possibilities are endless.

Figure 3: Mexus in Totality



Books: They are learner's best friend - always. Nothing can be a more engaging exercise than reading a good book.

CONCLUSION

Many companies develop interesting products – but only those firms that are effective in developing products that meet customers' needs and efficient in allocating their development resources will succeed in the long run. Better new product development processes should translate into a higher completion rate of projects, more projects meeting their deadlines and budget requirements, and more new products meeting their sales objectives and earning a commercial return. The ability for rapid implementation of the strategies for maximizing the effectiveness of new product development may prove to be as important to a company's competitiveness as the innovative products themselves. Mexus Education strives to make education a way of life- education that is derived from life's experience, from something that is enjoyable, adventurous and lasting more than compulsive. It was brought through quality content, technological breakthroughs and furthering accessibility with its robust retail network. The future of its products lies with its stakeholders, many questions now seem to be answered but acceptance of this technology; content and methodology really need to be checked across in future. This orientation has added a new perspective to education taking it out of the boundaries of time and space . The more and more people will get technology savvy the more acceptability will be there for ICT enabled teaching learning process.

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