DAVID GREEN - DELIVERING QUALITY EYE CARE IN THE DEVELOPING COUNTRIES THROUGH COLLABORATIVE SYSTEMS

Teaching Note

Abstract

This case is about David Green (Green), a social entrepreneur who revolutionized eye care, by providing low-cost Intraocular Lenses (IOL) to the poor, creating a ripple effect on corporate medical equipment manufacturers, governments, and regulators of various countries.

The case elaborates on Green’s vision, strategy, and progress. Green joined Seva Foundation in 1983 and took up an assignment in Nepal\(^1\), where people with cataract\(^2\) could not afford the surgery. He then developed a socially-driven, self-sustainable eye care institute in Nepal.

Later, Green teamed up with India-based Aravind Eyecare Institute (Aravind), and established Aurolab – the first indigenous, not-for-profit IOL manufacturing facility in the country. Aurolab went on to capture 10% of the global IOL market, the largest share in the sector. The case highlights the economies and efficiencies achieved by Aurolab, which sold IOLs at $10 for a pair initially and later on for $4, compared to about $150 per pair by manufacturers in developed countries. This success prompted Green to replicate such interventions in several other countries in collaboration with the respective governments. His efforts resulted in several governments regulating the prices of IOLs and other eye care devices.

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\(^1\) Nepal is a developing nation in Asia, with less than $ 500 per capita income,

\(^2\) A cataract is a clouding of the lens in the eye which leads to a decrease in vision. It is corrected by removing the clouding lens and replacing it with an artificial lens, known as Intraocular Lens or IOL.
The case offers rich insights into the making of a social entrepreneur and the building of a social enterprise, the key dimensions of social innovations, and the power of synergies. It also offers insights into Green’s assignments which focused on building sustainable healthcare systems around the world.

**Case Structure**

The case begins with the story of David Green’s initial interface with Seva Foundation and his journey into the Social Entrepreneurship arena. This is captured in the section ‘Making of a Social Entrepreneur’.

The next section ‘Rolling out Intervention’ narrates his maiden experience as a Social Entrepreneur in collaboration with Lumbini Eye Care Institute, Nepal. The section elaborates on the processes involved in building an eye care system that is affordable to the poor.

‘Building a Sustainable Model’ deals with building a sustainable revenue model in Lumbini Eye Care by introducing and establishing various managerial functions.

The ‘Impact’ section captures the deep impact that Green made on the eye care scenario in Nepal and the adjoining states of India. The section highlights the tremendous improvement achieved in staff productivity, managerial processes, and systems.

The next section ‘Green @ Aravind’ rolls out Green’s experience with India-based Aravind Eye Care System, and his role in developing hospital systems. It also describes the challenges he faced in procuring affordable IOLs.

The ‘Aurolab’ section is about how a lab was established to produce affordable IOLs. This section highlights the principal entrepreneurial traits Green successfully demonstrated in erecting a socially-oriented healthcare system which included procurement of technology, transfer and management of new knowledge, training the staff, instilling the operational processes, and achieving economies of scale.

The ‘Spreading the Reach’ section gives an account of the efforts of Green and Aurolab to take the product to a larger population through marketing and communication efforts, product promotion and development strategies, and effective distribution channels.

**Impact@Aurolab** is about Green’s role at Aurolab to establish economies of scale by striking a balance between pricing and the number of surgeries. The section describes how Aurolab impacted the competition and compelled them to reduce the prices of eye care devices, not only in India but across several other developing countries. It highlights the role played by Green and Aurolab in bringing the government bodies and regulatory authorities into the eye care segment to make the segment a level playing field.

The final section ‘The Road Ahead’ is about Green’s subsequent endeavors to address the challenges related to hearing impairment.
Learning Objectives:

- The key objectives of this case are to:
- Bring in change through collaboration
- Analyze the role of a social entrepreneur in bringing about a systemic change
- Evaluate the Key Dimensions of Social Innovation in collaborative problem solving

Research Methods / Data Sources

The research methods used include various sources of information like interviews of the protagonist and related websites, published articles, research papers, and book chapters from various secondary sources.

Suggested Teaching Approach:

We have used the following approach to teach the case and have found it to be a very effective method for engaging students on the issues highlighted in the case. We asked the students to read the case and complete the discussion questions prior to class discussion of the case.

We began the case discussion by asking the students to put themselves in the shoes of the protagonist in the case and appraise the situation of eye care around the world, before the protagonist came up with the solution. We asked the students to list the questions that would have arisen in their minds before they moved toward the solution. The students listed various questions like:

- Why are medical devices and services so premium priced?
- Can’t governments do anything about this?
- Why are the regulatory bodies keeping quiet?
- Can nobody make a beginning?
- What could be a possible solution to this?
- What are the essential requirements for making a social change?

The students’ responses to the questions started off an ice-breaking discussion. A 10-15 minute discussion set the context for the case. As the case was protagonist-centric, we allowed the students, through the discussion, to step into the shoes of the protagonist and think as a social entrepreneur, and about his role in solving eye care and blindness related problems through collaborative systems. By the end of the discussion, the students had got well into the role of a social innovator. They had become sensitized to the issue discussed in the case (global blindness) and were conditioned to think like a social entrepreneur.

We then divided the class into 5 groups of 7 students each and asked each group to list the possible causal factors that could have made eye care a costly affair. We gave the groups about 10 minutes to come up with answers. In their response, they listed several factors like the profit-making motive of business houses, lackadaisical attitude of the government, laxity
in regulations, possible strong lobbying among branded product makers, lack of academic bent toward courses with social orientation, etc.

We then asked the students to list possible solutions for these issues. The students came up with solutions like stronger regulations, government initiatives toward the poor, encouragement to social enterprises, promoting social entrepreneurship as a career, and setting up more organizations like Ashoka and Seva that promote social causes through social entrepreneurs.

The issues and the suggested solutions were noted down on the white board. The students were allowed to debate and arrive at a consensus to identify the most pressing concern and to suggest the most recommended solution. While the growing divide between the rich and poor was considered the most pressing concern, the active participation of social entrepreneurs like the protagonist in the case, and in larger numbers, was identified as the most recommended solution. The discussion set the context for the case and we could smoothly transition to discussing the case questions. (Can give a board plan here – example).

<table>
<thead>
<tr>
<th>Board Plan</th>
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<tbody>
<tr>
<td><strong>Why is eye care costly?</strong></td>
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<tr>
<td>• Profit-making motive</td>
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<td>• Lackadaisical attitude of government</td>
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<td>• Laxity in regulations</td>
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<td>• Strong lobbying</td>
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<td>• Lack of social orientation</td>
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<tbody>
<tr>
<td><strong>Most Pressing Concern</strong></td>
<td><strong>Best Solution</strong></td>
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<tr>
<td>• Growing divide between the rich and the poor</td>
<td>• Solving problem through collaboration</td>
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Discussion Questions and Analysis:

How did David Green bring about change in the global eye care system through collaboration? What qualities of a social entrepreneur do you find in him?

(The students can be asked to discuss the qualities of Green that helped him to bring about a change in global eye care and healthcare systems. The answers given by the students can be summarized on the board – and the qualities of a social entrepreneur can be arrived at.)

- Social entrepreneurs possess the mind of a business entrepreneur and the heart of a philanthropist. They possess a rare combination of traits – those of a business entrepreneur with those of an empathetic social human being.
- Social entrepreneurs look for such areas in their community where people are suffering due to systemic failures and systems are paralyzed. In the case *David Green – Delivering Quality Healthcare to the Poor by Creating Sustainable Healthcare Systems*, it can be observed that Green realized that inaccessible prices and the failure of the regulators concerned had resulted in the deprived sections of society not being able to access eye care. This challenge fueled Green’s passionate quest for change.
- These entrepreneurs come up with creative new systems and models that promise to make a difference in people’s lives. Social entrepreneurs are persistent. They keep trying until they realize their dream.
- Social entrepreneurs are committed to their pursuit and are passionate about their cause, which helps them face various challenges. They are resourceful by nature. They are champions of seeking out partnerships and forming collaborations that support their cause.

<table>
<thead>
<tr>
<th>Board Plan – Question 1</th>
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<tbody>
<tr>
<td><strong>Qualities of Green</strong></td>
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<tr>
<td>He reduced the cost of IOLs and other surgical equipment to benefit the poor and also made Aurolab a profitable venture</td>
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<td>He was highly concerned about the prevailing incidence of blindness which was mainly due to the high cost of eye surgeries and IOLs that impacted the poor</td>
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<td>Where the IOLs were sold at $150 per pair, he brought down the cost to $10 and further down to $4.</td>
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<td>He spent several years in pursuing his objective of bringing down healthcare costs</td>
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- He worked relentlessly for the cause he believed in.  
- He quickly understood the problems and found ways to overcome them and convinced the board to set up a manufacturing facility.  
- He partnered with organizations like Seva, Aravind, Lions, SightSavers, CBM, WHO, ORBIS, and the governments of several countries.  
- He achieved operational excellence in making IOLs; replicated the model in several hospitals in a sustainable manner; and facilitated regulatory changes in several countries to reduce the cost of healthcare.  
- He made a global impact in affordable eye surgery and compelled the companies to bring down costs. Millions of people with cataracts were operated on.

<table>
<thead>
<tr>
<th>Stage</th>
<th>Definition</th>
<th>Success factor to move on to the next stage</th>
<th>Definitions</th>
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<tbody>
<tr>
<td>1. Defining Systemic Problem</td>
<td>Defining Systemic Problem is stating a problem derived from overall social system; the root cause of inequality, human insecurity, or crisis of global sustainability.</td>
<td>Opportunity to create social enterprise generated</td>
<td>Strong leadership of the founder(s) generated</td>
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<td>2. Individualizing Enterprise</td>
<td>Individualizing Enterprise is an activity solely by the founder (or, co-founders) of a social enterprise (e.g., weak brand, small capital, professional immaturity).</td>
<td>Strong leadership of the founder(s) generated</td>
<td>Strong and professional teamwork to tackle systemic problem</td>
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<tr>
<td>3. Organizing Enterprise</td>
<td>Organizing Enterprise is an activity by team of the social enterprise utilizing Theory of Change (ToC) (e.g., vision and mission shared by ToC, quality development, aligning).</td>
<td>Ecosystem, Collective Impact, Impact</td>
<td>Ecosystem, Collective Impact, Impact</td>
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<td>4. Socializing Enterprise</td>
<td>Socializing Enterprise is an activity by stakeholders in society who strive to solve systemic problem collectively (e.g., multi-stakeholder engagement, shared estimation, policy proposal).</td>
<td>Sustainability and social resource circulation getting realized</td>
<td>Sustainability and social resource circulation getting realized</td>
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<tr>
<td>5. Achieving Systemic Change</td>
<td>Achieving Systemic Change is realizing a fundamental change at the level of the social system, which prevents or alleviates systemic problem per se.</td>
<td>Sustainability and social resource circulation getting realized</td>
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**How can social entrepreneurs bring in a systematic change?**

The progress of any successful social entrepreneur can be explained through the five stages given in the following table.

**Stages of a Social Entrepreneur**
Stage 1: Defining the Problem:

- The first stage is *Defining the Problem*. A Systemic Problem is a problem derived from the overall social system; the root cause of inequality, human insecurity, or crisis of global sustainability.
- The problem discussed in the case is the lack of access to proper eye care among the poor because of their inability to pay for the products and services. The problem has deep-rooted causes like regulatory failure, greed among business houses, and lack of concern toward the economically deprived sections of society.
- Marginalized people have little opportunity to access health benefits as described in the case. David Green along with his associates acknowledged and appraised the problem.
- Green addressed and identified the systemic problem of lack of access to healthcare within the social systems and structures and addressed them by bringing about appropriate solutions that delivered a revolutionary change.

Stage 2: Individualizing Enterprise:

- Individualizing Enterprise is an activity undertaken solely by the founder (or co-founders) of a social enterprise. In many cases, social enterprises are established by a single social entrepreneur. She/he devotes her/his best to starting and sustaining the social enterprise in spite of a weak brand, small capital, or professional immaturity.
- During his association with Aravind Eye-care Institute (Aravind), Green convinced Aravind’s board to start up a manufacturing facility to bring down the cost of cataract surgery, so that eye care could reach all people irrespective of their economic status. Through Aurolab (the manufacturing facility of Aravind), Green demonstrated a strong sense of leadership as a social entrepreneur.

David Green’s Stages of Progress as Social Entrepreneur

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<tr>
<th>Definition</th>
<th>Defining Systematic Problems</th>
<th>Individualizing Enterprise</th>
<th>Organizing Enterprise</th>
<th>Socializing Enterprise</th>
<th>Achieving Systematic Change</th>
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<tbody>
<tr>
<td>Green along with SEVA identified and acknowledged blindness as a global issue and cataract as a disorder responsible for 80% of blindness</td>
<td>Green joined Aravind Eye care, pitched for the necessity to startup own facility to manufacture surgical equipment</td>
<td>Green directed the setting up of Aurolab, the indigenous manufacturing facility of Aravind</td>
<td>Aurolab started selling its IOLs to hospitals, collaborated with various dealers, and reaped the benefits of economies by serving the needy</td>
<td>Aurolab, under Green’s leadership effected systematic changes, influenced regulatory changes and created a competitive landscape</td>
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**Success Factors to move on to next stage**

| Green could successfully identify the problem, its size, and the resources to address the problem. | Green secured the willingness of various stakeholders to overcome the problem | Green Set up Systems, Processes, SOPs, policies, offering training, instilling quality controls and feedback mechanism | Green worked with various external stakeholders, forming teams, instilling supply chain networks, advertising, branding, marketing to make a collective social impact | Green could communicate his initiatives, efforts, and results to create sustainable healthcare units to bring about a necessary social change |

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**Stage 3: Organizing Enterprise:**

Organizing Enterprise is an activity by a team of the social enterprise utilizing the Theory of Change (ToC). This stage could be observed when Green and his team collaborated with the Florida-based organization for transfer of technology for IOL manufacturing. Green rolled out the Organization development intervention at Aurolab. He defined the roles and responsibilities of people. He made the staff go through intensive training sessions and led the demonstrations on manufacturing under the supervision of the technology owners.

This stage could also be observed in Green’s intervention in building Lumbini Eye Care Institute (LEI). Green organized a team with the roles, responsibilities, and functions very clearly defined. He made sure that all information was shared effectively with the team members.

**Stage 4: Socializing Enterprise:**

Socializing Enterprise is an activity undertaken by multi-stakeholders in society who strive to solve the systemic problem collectively. Actually, just a social enterprise with change can’t have so much social impact on society. Social entrepreneurs would be expected to socialize their enterprise. As we saw in Green’s case, he built a sustainable model of healthcare at LEI as well as at Aurolab. Green carried out the initial social impact estimation and impact investment in association with several stakeholders to successfully build a Socializing Enterprise.

Green not only had an understanding of the broad environment in which he was working but also created congenial ecosystems for the stakeholders to bring about long-lasting and significant social change. As mentioned in the case, the stakeholders were rewarded with incentives in accordance with their efforts. Work timings were also conducive to the staff. The multi-stakeholders involved in the building of Lumbini as well as Aurolab were treated as their “backbone”. The dealers who sold Aurolab’s products were given liberal margins and handsome incentives.
Stage 5: Systemic Change:

- Systemic Change is a fundamental change at the level of the social system, which prevents or alleviates systemic problems.
- Green influenced systemic changes by moving the governments and regulatory authorities around the world in a bid to reduce global blindness. He played an instrumental role in creating a competitive landscape in the IOL manufacturing sector.
- Ashoka (2015) identifies the 5 most common patterns of systemic change viz. Market Dynamics and Value Chains; Public Policy and Industry Norms; Business-Social Congruence; Full Citizenship and Empathetic Ethics; Creating a Culture of Change making and Social Entrepreneurship. All the five ingredients of successful systemic change can be observed in Green’s initiatives and the impact they had on society.

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<th>Board Plan – Question 2</th>
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<tr>
<td><strong>How did Green Progress in bringing a systematic change?</strong></td>
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<td><strong>Stage 1</strong></td>
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<td>Stage 5</td>
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What are the key dimensions of social innovation?

- The complexity of the Social Innovation (SI) concept has been analyzed increasingly in systemic terms.
- SI is defined as ‘new ideas (products, services, and models) that simultaneously meet social needs (more effectively than alternatives) and create new social relationships or collaborations (BEPA- Bureau of European Policy Advisers). We can observe that Green’s innovations in products, services, and models fitted in perfectly with the definition of SI. Green led such innovations at LEI and Aurolab which were not only good for society but also enhanced society’s capacity to act.
- Green introduced several products like IOLs, surgical sutures, etc. He also introduced several models like a sustainable organization through practices like multiple tiers in pricing, product bundling, etc., which brought those needing the service and the
service closer than ever before. Green led several instances of SI, producing new social practices and relations or products based on collaboration and participation of various stakeholders.

### Dimensions of Social Innovations

- **Analytical concept:** social practice
- **CONCEPTS AND UNDERSTANDING**
- **Addressed societal needs and challenges**
- **Governance networks, actors**
  - Functions, roles and new concepts
- **Process dynamics**
  - Mechanisms of diffusions: imitation, social learning; relationship to social change
- **Resources, capabilities and constraints**
  - Capacity building, empowerment and conflict
- **Potential scope impact**

**Source:** https://epthinktank.eu

- As in the case of any social innovation, to begin with Green understood the concept of sustainability and evaluated the feasibility of coming up with a sustainable model for offering eye-care at low/ no price to the poor. He then went on to build a system at LEI as well as at Aurolab, by developing the necessary models, practices, frameworks, products, principles, etc.

- After attaining the required capability and maturity in processes as well as people, Green led Aurolab to create the process dynamics to effect the desired change. The change had a ripple effect that knocked on the doors of governments and regulatory bodies, resulting in a systemic change. A social innovation is a new combination of social practices in certain areas of action or social contexts prompted by certain actors or constellations of actors in an intentional, targeted manner.

### How can ventures that bring in social change become scalable?

**Layers of scalability**

**Layer 1: Foundational elements**

- *Clear vision and mission:* Green started working toward LEI, Aravind, and each of his pursuits with a clear vision and a solid mission. He had the vision of contributing to the reduction of blindness globally.
• **Exceptional leadership:** Green’s extraordinary leadership drove LEI, Aurolab, and several such organizations that have successfully become sustainable through appropriate strategies.

• **Core product or service:** Social enterprises need to keep a tight control on the costs of their products or services just as Green’s initiatives brought down the product and services costs at LEI and Aravind which influenced the systems and regulators around.

• **Adequate funding:** Like Seva Foundation supported Green’s initiatives, which was followed by several other facilitators, funding is essential for a social enterprise to get past the teething challenges, overcome hurdles, and achieve the efficiencies of economy.

• **Layer 2: Growth levers**

• **Leveraged technology**

  With Aurolab, Green brought in the technology to make the IOLs. This was followed by the making of other surgical tools like sutures and more. Aurolab successfully transformed the majority of its fixed capital costs to operating expenses. Technology helped it to scale up repetitive activities and lower unit costs.

• **Cost-effective platforms:** Aurolab resorted to cost effective delivery platforms like dealers.

• **Shared Knowledge:** Further, Green partnered with several healthcare organizations, which made the inter-exchange of know-how, product development, engineering, demand generation, infrastructure, and knowledge much easier. Green himself encouraged his models to be copied and replicated so that there would be a larger good happening in the society.
Social Enterprise Accelerator Model

- **Layer 3: Market makers**

*Changed attitudes and behaviors*

- The revolutionary IOL and other products produced under the leadership of Green resulted in political, social, and economic movements. They brought about a change in the thinking, attitude, and behavior of the stakeholders and competitors, resulting in the much desired systemic change.

**Epilogue**

David Green was happy with the transforming change that LEI and Aurolab brought about under his supervision. He went on to work with several such organizations around the world. With his interventions in eye care demonstrating his excellence in social innovation and social enterprise building, he was excited about replicating similar frameworks in other area of health. His rich experience of 30 years in bringing about deep-rooted changes in public health policies served to boost his energies and enthusiasm and made him more determined to bring about greater changes in society.

His experiments with technology, sustainability, and market forces to provide affordable medical treatment to people in need, which proved to be tremendously successful, were now to be implemented in more sectors. With his approach of achieving economies of scale to provide wide social benefit to people, regardless of their economic condition, he now looked forward
to expanding his presence in the segment of hearing challenges. He founded the firm Sound World Solutions with the mission: “To create and deliver high quality, affordable hearing devices that allow people to rediscover the power of connection, no matter what their geographic location or economic circumstance happens to be.”

References and Suggested Readings

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