

»» DEG evaluation results



Bridging the skills gaps in China

Hape Holding AG – A sustainable toy manufacturer fosters youth apprenticeship and the development of its suppliers

This case study is part of a larger study on skills gaps: *“Bridging the skills gaps in developing countries – A practical guide for private-sector companies”*. For more information, please refer to DEG’s website: www.deginvest.de under the header “what is our impact”.

This report is a result of DEG's evaluation work regarding development effectiveness. DEG's monitoring and evaluating team checks at regular intervals whether the transactions it co-finances help to achieve sustainable development successes and points to ways of making further improvements for DEG and its customers. To ensure the independence of evaluation results, external consultants support the work of the team.

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We sincerely thank Hape Holding AG for the great cooperation while conducting this study.

Photos: BCG and Hape Holding

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DEG – Deutsche Investitions- und
Entwicklungsgesellschaft mbH
Kämmergasse 22
50676 Cologne
Phone 0221 4986-0
Fax 0221 4986-1290
evaluation@deginvest.de
www.deginvest.de

Hape Holding AG

A sustainable toy manufacturer in China fosters youth apprenticeship and develops its suppliers

Executive summary

The Hape Holding AG (hereafter Hape) is a leading manufacturer of toys made from renewable materials such as wood and bamboo. The group's main production facility is in Beilun, in East China. Producing innovative and high-quality toys, Hape is reliant on a supply of adequately qualified workers – workers who combine a thorough understanding of wood as material with technical ability at handling the increasingly complex machines. Guaranteeing high quality to its clients, the company also depends on the quality of its supplied and pre-processed materials. For these reasons, and to give something back to society, Hape has introduced various initiatives to address skills gaps on three levels – workforce development, skills development along the value chain, and closing skills gaps in the broader community.

Within this broad approach to tackling its skills gaps, a few particular initiatives deserve highlighting. With regard to workforce development, Hape has developed a dedicated three-year vocational-training program for wood-mechanics to ensure the supply of adequately trained workers. With regard to skills development along the value chain, the company also trains its suppliers of wood products and bamboo products in order to improve the quality and punctuality of its supply. As part of its community-development activities, Hape runs an Experience Center which offers the full collection of Hape toys for children to play with and is building a bamboo kindergarten in the company-owned bamboo forest in order to raise awareness of the educational value of play, and to promote a more nature-oriented education from the very start of a child's life.

Hape's wide-ranging initiatives to address skills gaps have significant positive effects on the company, its employees, the suppliers, and the broader community. Hape itself benefits from a better-educated and highly motivated workforce, product innovations and higher quality of its supplies and final products. Its employees have better career opportunities at Hape, with the prospect of higher earnings and an increased "market value". For suppliers, the initiatives have opened up new earning opportunities and have raised the safety and efficiency of their production. And as for the wider community, it profits from more and better jobs not only in Beilun but also in the communities of the numerous suppliers and the location of the training school. Furthermore, better-educated employees are able to support their families and they tend to value education more – a benefit for generations to come.

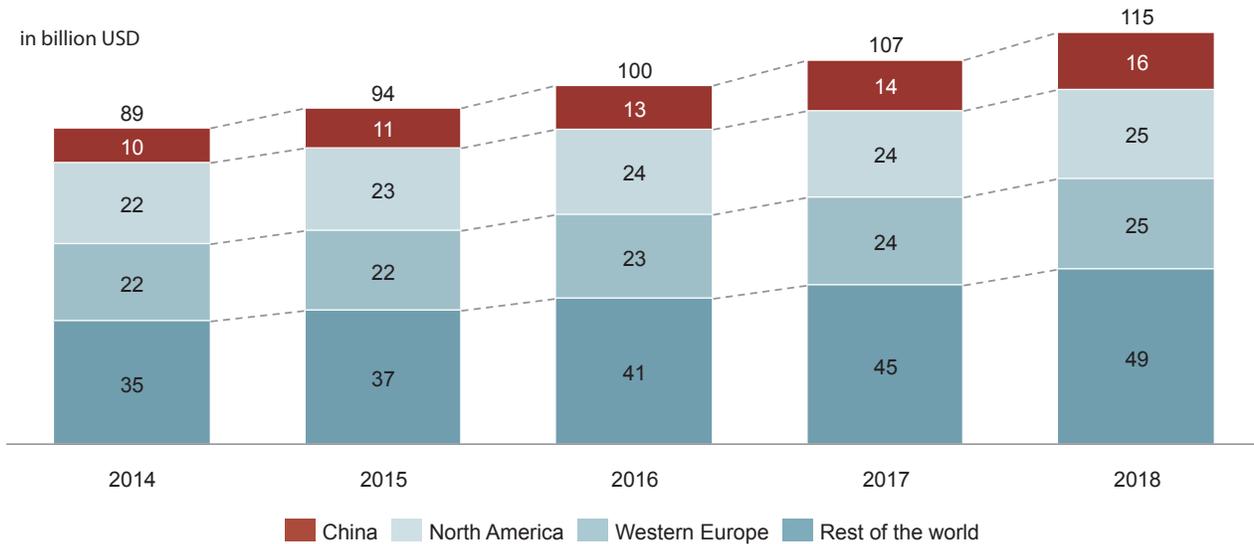
The commitment of the company's founder and top management to pursuing skills development and forming long-term relationship with its employees was one key success factor of Hape's initiatives. In addition, Hape's emphasis on "training the trainers", and enhancing the transfer of knowledge from international experts to employees at the local level, serves as a model for other private-sector enterprises that would like to invest in closing skills gaps. Among Hape's various initiatives, there are three aspects worth emphasizing on account of the positive experiences they demonstrate and their potential for replication by other companies: a systematic identification and development of internal talent; setting up a vocational training program with external partners; and fostering intra-company knowledge circulation through international secondment programs. Leveraging its experience from China for its new production facility in Romania, Hape seconds new Romanian staff to China, and has also formed a partnership with a local vocational school in Romania to train employees. Three good practices could be replicated by other companies in order to address similar skills gaps in their workforce: systematically evaluate and develop internal talent (good practice 3.2 in the good-practice framework for workforce development described in Chapter 2.1); develop a vocational training program tailored to the company's needs (4.4) and foster intra-company knowledge circulation (4.5).

In order to tackle skills challenges successfully, a number of recommendations have been identified, the most important ones being: reduce attrition rates of new hires in the first months; increase the appeal of work; and ensure that the relevant skills are taught. Hape's experience has shown that – by investing in the education of the workforce, along the value chain, and within the community – it is certainly possible to bridge local skills gaps, and that such investment can prove profitable in the long run.

1. Company background

The Hape Holding AG, founded in 1986 by the German entrepreneur Peter Handstein, has advanced over the last two decades to become one of the leading producers of educational wooden toys. In 1995, after years of continuous growth within Europe, Hape expanded to Beilun (Ningbo) in East China, where it created an innovative factory adopting ecological, technological, and efficiency practices. The company's ecological ethos is evidenced

Figure 1: Market size and forecast for North America, Western Europe, China, and the rest of the world



Note: Individual values may not sum up to totals due to rounding errors

by using renewable raw materials as much as possible and by its exclusive use of water-based colors in production.¹ As an Original Equipment Manufacturer (OEM), Hape produces wooden toys for renowned international companies (about 60% of sales), and has also developed its own brand Hape as another key area of activity.

Experiments in using the local bamboo plants for toy production led to an alliance with UNESCO and the first full line of bamboo toys in 2005. The recent acquisition of George Luck Puzzles™ and Käthe Kruse® plush toys has expanded Hape’s product portfolio. Hape works together with bamboo- and wood-suppliers in the nearby regions of Anji and Yunhe, who produce spare parts as well as wooden and bamboo products.

The company has been growing continuously over recent years: it now employs about 1,400 people worldwide, and sells its products in over 60 countries across various regions. Hape aims to double its revenues by 2018, to reach USD 193 million, by increasing sales of its own brand – particularly in China.²

2. The global toy industry’s irresistible rise

Following long continuous growth, the market for traditional toys and games (excluding electronic games and toys) has developed into a global USD 94 billion business, and is expected to grow further by 7% annually until 2018 (see Figure 1).³

Western countries used to be the key sales destinations, but today Asia, Western Europe, and North America represent equal-sized markets, each with USD 23 billion of sales in 2015.⁴ The outlook for the global toy market remains positive, with strong growth outside the traditional core markets.

Taking a global view, the People’s Republic of China is the world’s biggest producer and exporter of toys. It is responsible for 68% of all toys sold in the US, and for 85% of toys sold in Europe.⁵ As well as being the largest manufacturer, China is also the most promising market: its own demand for toy products is projected to grow by 12% annually until 2018, offering enormous sales potential for manufacturers.

3. The workforce challenge faced by Chinese businesses

Significant improvements have been made in China over the last two decades in regard to education. By implementing compulsory schooling for children aged 6 to 15, China has attained universal primary enrolment and gender equality in education. Some 74% of students also go to upper secondary school: 43% of those study at a vocational institution, and the remainder at a general secondary school without an occupational focus.⁶

Despite these great strides in the last couple of years, China will need to invest even more in education if it is to fully achieve the transition to an upper middle income country. The Chinese economy is structurally changing from a manufacturing-based

All notes at the end of this chapter (Page 17)

to a service-based economy. Service industries took over from manufacturing industries as the main growth driver in 2013 – both in terms of share of GDP and in terms of GDP growth.⁷ This transformation necessitates a large number of skilled workers (those with university degrees or vocational training) in the upcoming years.

According to estimates, 24 million skilled workers could be lacking by 2020, assuming that no major policy changes are made.⁸ About two thirds of this shortfall is expected among vocationally trained workers, and one third among university graduates. This predicted skills gap could in the worst case lead China into the “middle-income-trap”, a well-known phenomenon where emerging economies stagnate and fail to progress into the ranks of high-income countries.⁹ Until 2030, the shortage of (skilled) workers is expected to intensify even further, owing to the long-term negative effects of China’s one-child policy and the substantial time lag before the recent changes in population policy have an effect.¹⁰

China used to be a cheap offshore production location for low-value-added manufacturing, but manufacturing wages rose 11.9% annually between 2001 and 2012. Productivity has been growing too, but at a slower pace.¹¹ That indicates a worrying trend: productivity, which depends on the skill level of the labor force, needs to increase; otherwise, jobs and potential jobs will migrate to other emerging markets.

In short, China needs to increase its labor productivity if it wants to remain a competitive production location; and for that to happen, China needs to have sufficient high-skilled workers. In the long term, education-policy reforms by the Chinese government, such as adjustments to the curriculum, can help in closing the skills gap; but currently, companies face a mismatch between the skills required and the skills being taught. Therefore, the private sector needs to invest in skills development. For Chinese employees, the most important characteristic of a job is the opportunity it offers for learning and career development – this characteristic ranks higher than work-life balance or an attractive salary – so investing in skills development also constitutes an asset for companies in respect of recruiting qualified employees.¹²

4. Hape's skills gaps in production and administration and among suppliers

Hape is experiencing skills gaps both in production and in administration: graduates prefer working in industries with a more modern image than wood-processing, such as electronic goods manufacturing. In addition, vocational schools and universities have failed to update their curricula to meet the changing needs of the market with regard to hard and soft skills. For instance, one attribute often missing among new Hape employees is the ability to solve problems in groups – a key skill in modern-day organizations.

Figure 2 provides an overview of Hape’s internal skills gaps, showing that the gaps are due mainly to quality (where the actual candidates lack the necessary skills) rather than to quantity (where too few suitably skilled candidates are available, since there is an insufficient number of them in the labor market as a whole).

Production: Difficulties in recruiting and retaining qualified production workers

In production, the company struggles to recruit and retain qualified wood-workers who have mechanical skills suitable for a variety of machines and tasks, and who possess a deep understanding of wood as production material. Given Hape’s ambitious growth targets, however, a sufficient supply of wood-workers is crucial. As with other companies in the toy industry, Hape also finds that young people are now less willing to work in the noisy and dusty environment of a wood-workshop: they prefer cleaner working conditions, such as those offered by plastic-injection molding companies or white-collar jobs in the services industry.

Hape, like other manufacturing companies, is increasingly investing in automation to address the scarcity of young and adequately trained production workers, and is also reducing production costs and raising quality standards. These processes are driving the need for better-qualified personnel.

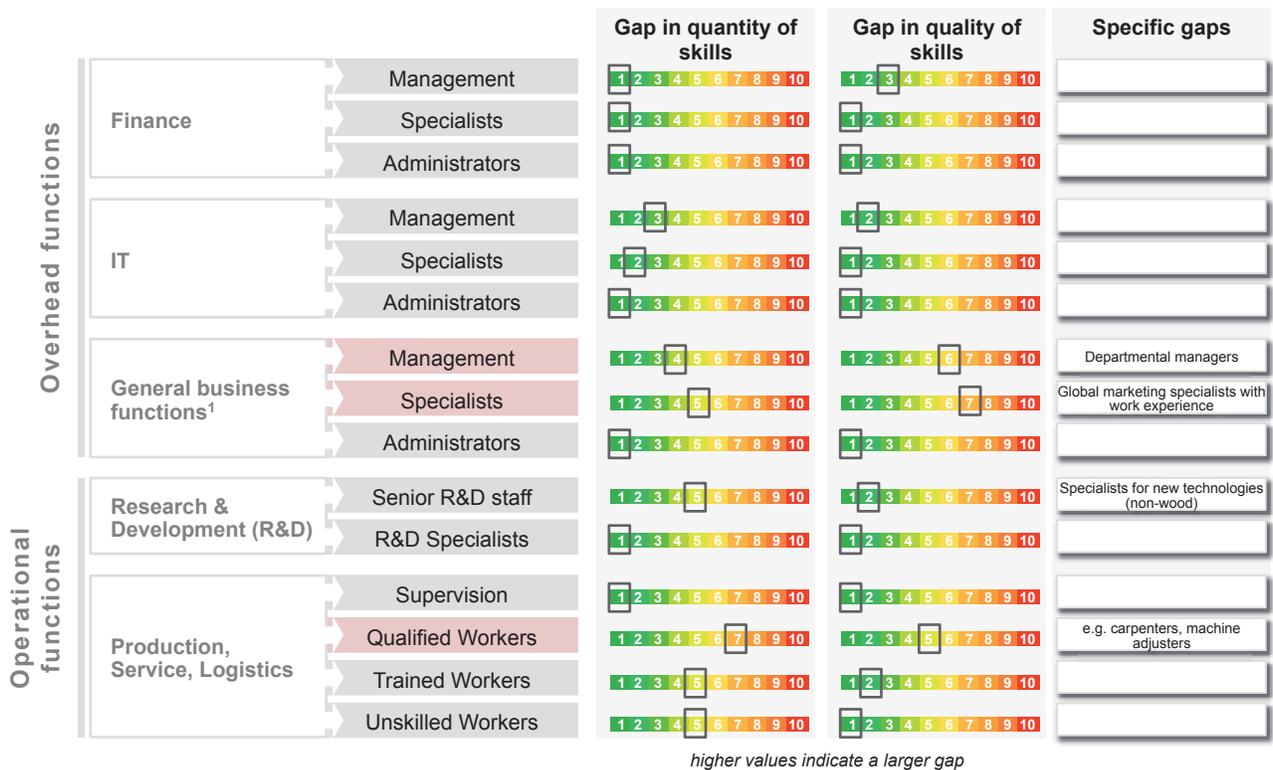
“A production worker aged 40 is actually considered young in the toy industry.”

Manager of a large supplier in Yunhe

Retention of new hires – a challenge for Hape

With an average time of 15 days to fill a vacancy in production, it is currently not particularly difficult to find new workers. The trouble is that almost 70% of these new hires leave the company within one year – most of them during the first three months. Excluding these departures, the annual attrition rate at Hape is only 11%, so clearly the key challenge is that of retaining new hires. Similarly, the attrition rate for newly hired administrative staff is 32%, compared to just 15% if the new hires are excluded. The average attrition rate in China is about 16%¹³, showing that Hape is actually very able to retain workers – provided that they stay for at least one year. Workers are paid for piece-work – i.e. their pay is based on their output – so new workers often receive only the minimum wage during their early weeks on the job, and that increases their discontent with the uncomfortable work environment. For Hape, the first month also serves as a probation period, during which the new hires’ performance is assessed. Attrition during these first months is considered part of the normal recruitment process. Since the company recruits about 500 workers each year to replace leaving staff, the high attrition rate among new hires involves a sub-

Figure 2: Assessment of Hape's skills gaps



1. Human Resources, Marketing and Sales, Communications etc.

stantial cost, as new workers have to be trained and productivity increases considerably with experience. And hiring itself is costly, as positions have to be advertised, candidates have to be interviewed and tested, and formal administrative work has to be completed.

Administration: Difficulties in filling specialist positions in marketing and design

In administration too, Hape struggles to attract adequately trained and experienced marketing experts to strengthen its brand globally. The reason is not only a general shortage of such personnel in this field in China, but also the location of the company's headquarters in Beilun. The city is less attractive for job-seekers than other cities in the region, such as Shanghai or Hong Kong. Similarly, it is difficult for Hape to attract the right designers for its local design office in China – specifically, designers with sufficient knowledge of Hape's international target markets. For this reason, and to ensure proximity to the European and other western markets, one of the international design teams is based in Italy.

Suppliers: Skills gaps in complying with Hape's high standards

Guaranteeing high quality for its clients, Hape is highly reliant on the quality of the supplied products and spare parts. Thanks to close monitoring of its supply base, Hape realized that many

suppliers lacked knowledge of modern production and quality management standards, process optimization, and environmental, health and safety standards.

5. Addressing Hape's skills gaps at three different levels

To bridge these skills gaps, Hape has implemented a number of initiatives that can be divided into three different types – workforce development, skills development along the value chain, and closing skills gaps in the broader community (see Figure 3). The first level comprises all measures that target the company's current or prospective workforce, such as internal training or vocational training programs. The second level includes training courses for suppliers, while the third level targets the skills development of the (local) community – for instance, through the construction of a local school.

5.1 Investing in your own people: Hape's workforce development

As the education system and labor market do not provide the specific skill set that Hape needs for its high-quality products, the company invests a lot in its current and prospective work-

Figure 3: Overview of Hape's initiatives to bridge its skills gaps

Type of initiative	Initiative	Main purpose
A <i>Workforce development</i>	A.1 Employee training program	Improve skills of new hires and experienced staff
	A.2 Identification and promotion of talented administrative staff	Form top talent pool for leadership positions
	A.3 Bamboo Research Center (2014–2016)	Generate new innovative ideas for bamboo products and improve skills in creative thinking and design
	A.4 Vocational Training Program (2011–2014)	Ensure (long-term) supply of adequately qualified wood-workers
B <i>Value-chain development</i>	B.1 Training of wood-suppliers (2006–2008)	Improve EHS among suppliers, as well as quality and punctuality of supply
	B.2 Training of bamboo-farmers (2007–2010)	Improve EHS among suppliers as well as quality and punctuality of supply; develop new products
C <i>Community development</i>	C.1 Hape Experience Center (2011–2014)	Promote creative thinking at a young age, and sales of Hape products
	C.2 Bamboo Kindergarten (included in research center)	Promote natural way of education, and Hape brand
	C.3 Maria Hope School, Yuzhang Central Kindergarten and Sunshine school	Support (early-childhood) education in poor region, and of disabled children

force. However, the engagement is not limited to the production site in China as the company invests heavily in the training of staff for its new production site in Romania (see Textbox 1).

Developing the current workforce through training and internal advancement of talent

Recognizing the importance of developing new hires as well as experienced staff, Hape has created a comprehensive employee training program for its administrative and production staff. The program comprises more than 25 mandatory and optional courses, such as “ISO (International Standards Organization) and toy regulations”, “Quality Control tools” or “Six Sigma”, that are provided in-house or through external experts.

In addition to these courses, Hape has introduced a sophisticated system to identify and promote talented administrative staff for leadership positions at the management level. All employees are evaluated on a list of published criteria, and are assigned to one of three groups – A, B and C. The performance of employees with high leadership potential in groups A and B is evaluated jointly by all department managers, in order to avoid biased evaluations by department managers that want to keep the talented employees in their own departments. In addition, A and B employees are required to conduct cross-departmental projects in order to gain exposure and expand their company-wide knowledge. They form a talent pool that is continuously trained and prepared for internally filling management positions – for instance, through exchange programs with Hape’s subsidiaries abroad.



Bamboo-lamp in Hape's Bamboo Design Center

Promoting innovative ideas through university collaborations and research in bamboo

In order to complement its internal design skills, build up skills in China, and give students the opportunity to gain practical international experience, Hape has over the last ten years collaborated with universities from Denmark, Germany, Israel, Switzerland, the US and China itself in setting up workshops, with about 15 students and two professors each year, on innovative uses of bamboo. And in order to further advance knowledge of bamboo as a plant and as a material for toys and construction, Hape began building a Bamboo Research Center in 2014 including a bamboo museum and kindergarten as well as an educational farm next to the actual research facility.

Textbox 1: Leveraging Chinese know-how for the new production facility in Romania



Workers in Hape's Romanian wood-workshop



Seamstresses in Käthe Kruse workshop in Romania

In 2014, Hape decided to expand production to Romania to make full use of the country's abundance of beech wood (which is mostly exported as raw material to China at present), its proximity to the European core market, and lower labor costs than in China. Located in Avrig – a town in the southern Carpathians near Sibiu – the Romanian Hape facilities are producing wooden toys and Käthe Kruse plush toys.

Gaps in skills specific to the wooden- and plush-toy industry

Given the high unemployment rate, the company received a large number of applications to fill its vacancies for production ramp-up, but most of the candidates lacked experience in wooden- and plush-toy production. Accordingly, Hape leveraged its expertise to train workers in its existing production facilities abroad.

Internal knowledge exchange to address the skills gap

Thinking well ahead, the company sent 17 workers, including foremen and production and plant managers, to China for training – some of them for more than a year – to gain a deep understanding of Hape's production processes, its machines specially developed in-house, and its quality standards. The foremen now lead the production ramp-up and train the other Romanian workers.

Similarly, for its plush-toy production, Hape sent four newly recruited seamstresses, who had previously worked in leather and textile production, to Käthe Kruse's production facility in Latvia to train them in the specifics of plush-toy production and the company's high quality standards. During the training, they rotated every two weeks to get to know the different production steps. After two months, their learning progress and skills were evaluated in order to assign them a position matching their skills and preferences, and to prepare them specifically for this position in the remaining three months. Three of the female workers are now employed at Hape as plant manager,

as forewoman, and in quality control. Additionally, during production ramp-up, two Latvians provided further training and assistance in Romania. The sustainability of the training is fostered through an ongoing exchange between the trainees and the trainers – for instance, in mastering the cutting processes.

In comparison with the training offered by other local companies (e.g. glass- and window-makers), the key success factors of the Hape program are: the strong support provided by Hape's production foremen and workers, and the dedicated approach of the school, which offers theoretical classes and practical training in the workshop. The program enables the students to actively perform simpler tasks in the production process instead of just standing by as onlookers.

As sewing is very popular in the region, Hape and the school are currently testing the demand for additional vocational training by offering internships to four young women to train as seamstresses specializing in plush-toy production.

Costs and benefits

By training some workers in its production facilities abroad, Hape has been able to realize a quick production ramp-up and to maintain the company's high quality standards. In plush-toy production, just three months after production began, productivity has already reached 60% of Latvian productivity levels, and the first deliveries of final products have been made. For Hape, the vocational training does not involve major costs, as it was only necessary to revive the pre-existing program and the workshop at the school. So Hape only has to cover the running costs, in the form of wood supply for the workshop, and indirect costs for staff time devoted to training. For the students, the program is very beneficial, in offering them the opportunity to secure a good position at Hape close to their homes in Avrig. The region has a high unemployment rate – the newly created jobs have made positive impacts on the community through increased tax payments and reduced social spending.

Securing a long-term supply of skilled wood-mechanics through vocational training

In the Chinese vocational-education system, the only wood-related apprenticeships are carpentry and carving, but both programs have a poor reputation. Additionally, university and vocational graduates tend to lack essential skills that Hape requires – skills in material management, technical drawing, machine maintenance, and work security. Accordingly, Hape decided to develop a vocational training program for wood-mechanics in cooperation with the government-run National Technical Vocational School in Xingren county in South Western Guizhou, China's poorest province, about 1,700 kilometers south-west of Beilun.¹⁴ This partnership forms part of the development-cooperation scheme involving the twinned cities Beilun and Xingren that was formed in 1998. Hape was already familiar with the region from a previous engagement with a local school, and now chose to set up its vocational program here to foster education and employment of the local young people, while at the same time ensuring a long-term supply of skilled workers for Hape's own purposes. Ideas for establishing a similar program closer to its production facility in Beilun were not pursued, as young people there are no longer willing to work in wood-production and prefer white-collar jobs.



Two vocational students in the school's wood-workshop

The three-year program is guided by the German dual vocational-training scheme for toy technicians and carpenters, combining theoretical lessons in school with practical exercises in the workshop and at Hape. The students spend the first two years in the school in Xingren, then work at Hape's production facility in Beilun during the third year. Hape set up the program at the well-established vocational school by building and equipping a wood-workshop with modern machinery, tools and wood materials for the practical exercises. Most importantly, four teachers were trained by one of Hape's best technical-department employees and by a German carpenter who stayed at the school for the first three years. To enable students from poor families to participate in the vocational training, Hape provides bursaries worth about USD 2,600 per year for the first two years of the program, during which time the students do not receive a salary.

In addition, there is a scholarship scheme for particularly talented students. To provide job-security after the training ends, Hape guarantees to employ at least the best 85% of graduates each year, and helps the other students to find a job if the company cannot contract them. The program has a maximum capacity of 50 places per year. Since its launch in September 2011, a total of 163 students have started the training, of which 17 have graduated to date.

5.2 Skills development along the value chain: Helping others as a way of helping yourself

Since the quality of its final products and hence the reputation of the Hape brand depend heavily on the quality of the supplied and pre-processed materials, Hape also needs to ensure that its suppliers are sufficiently qualified. Accordingly, the company has introduced dedicated initiatives for its wood- and bamboo-suppliers.

Training of wood-suppliers as the foundation for sophisticated supply-chain management

From 2006 to 2008, Hape trained 45 small and medium wood-suppliers in Yunhe in environmental, labor and safety standards, as well as in the principles of wood-processing and product quality. Thanks to two half-year training courses with two training days per week by Hape experts and to a comprehensive training manual, Hape managed to establish norms and standards corresponding to those of the International Council of Toy Industries and ISO. After the training courses, 34 of the 45 participating suppliers received Hape's "Certificate of Resource Protection." Despite introducing these higher standards, Hape was able to win nine new suppliers. At the same time, Hape stopped collaborating with other suppliers that were unwilling or unable to comply with the norms. Eventually, the training and certification laid the foundation for the introduction of systematic supply-chain management (SCM) and the establishment of a local supply-chain office, with seven employees to monitor and ensure the quality of supply from Yunhe. Such a strategic approach to supplier development is considered good practice in developing countries (see Textbox 2).

Today, Hape offers regular training courses for its suppliers – for instance, on health and safety for workers, and on quality and process improvements. Either Hape experts offer these courses for groups of suppliers directly in Yunhe or the suppliers visit Hape's production facilities in Beilun for training. In addition, selected employees of the suppliers can undergo traineeships with Hape in order to gain a better understanding of its production and quality standards. In total, about 70% of Hape's suppliers have received some form of training.

Training of bamboo-farmers as a means to new bamboo products

Hape also offered training courses to its bamboo-farmers in Zhejiang and Anhui province from 2008 to 2010 on optimized bamboo-harvesting and processing, product quality and value creation. After a course on environmental and safety issues, the farmers were trained by Hape experts on ways of creating bamboo products from their harvested raw material. Subsequently, a farmer's cooperative with 55 members was formed, which produced bamboo test cubes for Hape. In addition, three design workshops were held – with students from Tel Aviv, Weimar, Aarhus and Hangzhou – to bring together students and manufacturers with the aim of developing new ideas for bamboo toys.

5.3 Closing skills gaps in the broader community: Looking beyond your own house

Driven by its founder and CEO, Peter Handstein and forming part of the company's mission, Hape has made a point of caring since its foundation. In China, Hape has therefore invested in a number of different initiatives that contribute to closing skills gaps in the local community, especially initiatives targeting early childhood education.

Hape Experience Center and Bamboo Kindergarten: Playing is learning

Hape is very mindful of how important early-childhood education is in creating life skills and professional skills, and in fostering an independent spirit and creativity.¹⁵ Hape also recognizes that many Chinese parents and education authorities do not see the educational benefits of playing, and that they consider the primary purpose of toys is to keep children quiet. So Hape founded the Hape Experience Center as a pilot to raise awareness of a different concept of education. The center is a walk-in kindergarten in Beilun, offering children the opportunity to play with Hape toys under the guidance of specially trained kindergarten teachers, or to take courses in Do-it-Yourself, music, or English. Besides five high-skilled Chinese teachers, one employee is a Bulgarian citizen who specializes in child therapy and teaches western-style early-childhood education based on the children's innate ability to learn through playing.



Hape's Experience Center

Textbox 2: Strategic skills development of suppliers

Facing rising wages and competitive pressure to lower costs, companies from all industries are increasingly shifting parts of their production to suppliers. Without a systematic approach to supplier development, however, companies can run into a frustrating cycle of quality and capacity problems that lead to production interruptions, and require short-term firefighting and costly rush-orders from alternative suppliers.

Experience shows the great benefits of training suppliers to meet specific performance standards. The benefits go beyond quality improvements, and include reliability, punctuality, and improvements in environmental, health and safety, as well as cost-reductions and enhanced supplier loyalty.

To unlock this potential, companies must approach supplier development strategically, though in a way tailored to the supplier. Seven simple guidelines will help to put supplier development on the right track:

1. Target a small number of key suppliers.
2. Focus on what matters most, and do not try to fix everything.
3. Align the organization, and make supplier development a part of Purchasing rather than Research and Development.
4. Choose the right development approach, and specify how much training and what sort of training the supplier needs.
5. Engage and motivate the target suppliers by devising incentives and penalties.
6. Develop a roadmap, and ensure indicator-based reporting.
7. Measure and track results.

Source: Boston Consulting Group (2011): Supplier development. Bonanza or bust?.

Going one step further, Hape now plans to open an integrative bamboo kindergarten for about 40 handicapped and non-handicapped children in the planned bamboo research center to allow children to play in a natural environment. It will take a different educational approach from traditional Chinese kindergartens, which tend to focus sharply on discipline and indoor activities. The kindergarten will feature a nature-experience path in the company-owned bamboo forest, as well as outdoor playgrounds and an educational farm, serving as a showcase for nature-oriented education, and should help to spread the concept in China. The kindergarten is open for day trips by other kindergartens, so that they can give their children a different learning experience. With fees similar to those of normal Chinese kindergartens, the bamboo kindergarten is not profit-driven but rather aims to foster the awareness and value of nature education among parents, pre-school teachers and educationists.

Maria Hope School, Yuzhang Central Kindergarten and Sunshine school

Hape’s founder Peter Handstein funded the renovation of the primary school in Xingren, the Maria Hope School, with the aim of making a return contribution to Chinese society. The initiative involved replacing the old school building, and equipping it with modern facilities and teaching materials. The school’s capacity has more than doubled, to 1,000 pupils from grade 1 to 6. The school is located in a poor area inhabited by many children of migrant workers, so about 600 of the pupils board at the school overnight.



Maria Hope Primary School

Peter Handstein also co-funded the construction of the new Yuzhang Central Kindergarten to replace the old kindergarten that had reached the limits of its capacity. The government-run kindergarten provides early childhood education to the local children.

In Beilun, Hape also supports the Sunshine school for handicapped children, notably through donations of toys. In addition, employees of Hape’s design department devote one day a week to visiting the school and developing toys specifically for the needs of handicapped children, thereby underlining Hape’s long-term commitment to supporting these children.



Outside playground of Yuzhang Central Kindergarten

6. The role of DFIs: DEG as a trusted partner for Hape’s initiatives

DEG has been Hape’s longstanding financial partner in providing equity and now debt financing for the company’s long-term growth, and it has also played a vital role in realizing the various initiatives for addressing the skills gap. Since 2006, DEG has supported Hape within the develoPPP.de program and through a technical-assistance project financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) – catalyzing Hape’s investment in education through additional financing. In providing grants of up to 50% of the individual project costs, DEG has enabled Hape to make the initiatives a reality, and has thereby not only benefited Hape as a company but also made a distinct positive impact on the local communities.

7. The costs and benefits of Hape’s engagement

While the costs of Hape’s numerous and wide-ranging initiatives are based on accounting information, the benefits are difficult to quantify, as they accrue over time and on different levels. Figure 4 provides an overview of the costs and the

different groups of beneficiaries – the Hape company, its employees, its suppliers, and the community. The costs and benefits are described below for the three different types of initiative – workforce development, skills development along the value chain, and closing skills gaps in the broader community.

7.1 Costs and benefits of Hape’s workforce development

Company benefits: Having more and better-trained young employees at Hape

With running costs of USD 72,000 for internal and external training courses, Hape’s employee-training program produces various benefits by improving the safety and productivity of workers, and the quality of production and administration. The internal and external training courses also increase the motivation, retention and career of employees. Witness the relatively low turnover rate – tenures last an average of five years. Of the 300 employees that Hape had in China ten years ago, an impressive total of 250 still work for Hape. They received company shares on completing ten years of tenure, underpinning the company’s strategy to build a long-term relationship with its employees.

With no specific costs, the scheme for identifying and promoting talented administrative staff is very beneficial for Hape, in helping to secure qualified and experienced managers for leadership positions. For the employees, the system is impressively transparent, and enables them to develop leadership skills and climb the career ladder.

The costs of the Bamboo Research Center amounted to more than USD 3.5 million for the construction of the actual center, the integrated bamboo kindergarten, renewable energy supply, and bamboo guest houses. The financial benefits cannot be quantified, but research on bamboo constitutes the basis for future product development, and creates a potential competitive advantage for Hape’s all-bamboo product line.¹⁶ This bamboo product line and the company’s use of sustainable materials have attracted attention from the media – including a report by a leading international broadcasting company – which has promoted the brand on a global level. The workshops with international students, costing about USD 100,000 per year for travel and accommodation, create considerable positive benefits for Hape, as evidenced by the new product ideas that have emerged – for instance, a new bamboo toy (“Totter Tower”) that was developed by a student from Bauhaus University in Weimar and that has now become an integral part of Hape’s bamboo-product offering. The workshops have also proved beneficial from a hiring perspective: several of the participants have returned to

Figure 4: Overview of the costs and benefits of Hape’s initiatives

Type of initiative	Initiative	Costs ('000 USD)	Beneficiaries			
			Hape	Employees	Suppliers	Community
A <i>Workforce development</i>	A.1 Employee training program	Running: ~72 p.a.	+++	++		+
	A.2 Identification and promotion of talented administrative staff	No directly related cost	+++	+++		+
	A.3 Bamboo Research Center (2014-2016)	One-off: 3,579	+++	++	+	+
	A.4 Vocational Training Program (2011-2014)	One-off: 436 Running: ~23 p.a.	+++	+++		+++
B <i>Value-chain development</i>	B.1 Training of wood-suppliers (2006-2008)	One-off: 227	++	+	+++	++
	B.2 Training of bamboo-farmers (2007-2010)	One-off: 312	+	+	+++	+
C <i>Community development</i>	C.1 Hape Experience Center (2011-2014)	One-off: 441	++			++
	C.2 Bamboo Kindergarten (included in research center)	Included in research center	+			++
	C.3 Maria Hope School, Yuzhang Central Kindergarten, and Sunshine school	Privately financed by Peter Handstein	+	+		+++

+ Small benefits ++ Medium benefits +++ Large benefits

work for Hape. The Bamboo Research Center makes Hape even more attractive to international designers and researchers, and helps to increase knowledge exchange and innovation.

Having invested USD 436,000 for the set-up of the vocational training program – i.e. the construction and equipment of the training facilities and the training of the teachers – and financing the limited running costs of about USD 23,000 for scholarships and wood material, Hape begins benefiting from the vocational training when students enter their third year and start working at Hape's production facility in Beilun. These third-year students, as well as the graduates, have received a broad technical education, and have gained a profound understanding of wood as material and a higher awareness of working conditions and safety standards. All of that enables Hape to deploy the students flexibly on different machines, which ultimately leads to higher-quality products. Through the program, Hape also gains access to younger employees that bring fresh ideas to the established workforce.

Employee benefits: Enabling employees to develop their career and increase their earnings

From an employee perspective, Hape's high security and health standards, as well as its continuous training, mean that working at Hape becomes safer for them. In addition, the training courses enable employees to improve their existing skills and develop new skills, and to climb the career ladder. In particular, graduates from the vocational training program, thanks to their enhanced diligence and their understanding of the production processes, have a better chance of climbing the career ladder and becoming team leaders and foremen before they turn 30 years old, and can look forward to a long career at Hape (see the box for a brief case example). By making the workers more productive, the training courses also serve to increase the workers' income – which is based on piece-work – resulting in wages averaging about USD 500 per month (complemented by a comprehensive benefits package), compared with USD 350 per month for a typical worker in the Chinese toy industry.

Story of a beneficiary

The story of 20-year old WeiWei illustrates the social and personal benefits of the vocational training. Coming from a family of construction-workers, she graduated from the program in 2014, and is now working with Hape's state-of-the-art laser-cutting machine. Whenever possible, she sends money home to support her family. The production leader sees a bright future for her at Hape, with the potential to be a team leader in her mid-20s and a forewoman by the age of 30.

Community benefits: Fostering local skills development

For the local community, Hape's approach to internal training and talent development also creates advantages by securing employment and enabling employees to gain a higher income by means of increased productivity. Their families benefit directly, and the community benefits through higher consumption and tax income. Of Hape's workforce-development initiatives, it is undoubtedly the vocational-training program that generates the most social benefits for the community.



Vocational students in the school's wood-workshop

Hape emphasizes that its vocational training program should not be viewed primarily as a recruiting instrument but rather as a way of contributing to the skills development of young people in the less developed Guizhou province. The main benefit is to enhance the education and employment prospects of the children in the region – some of them from ethnic-minority families. Most students come from families with a low level of formal education, with the parents engaged in farming or construction work. By increasing the students' awareness of the importance and the long-term benefits of education, the initiative extends its positive effect to future generations. In fact, the positive impact goes beyond education: graduates who leave Hape usually return home to work or to start their own businesses, and thereby create additional job opportunities and contribute further to the welfare of the community.

7.2 Costs and benefits of Hape's skills development along the value chain

Company benefits– and benefits for the suppliers: Creating a win-win situation through the training courses

Hape's training program for wood-suppliers had one-off costs of USD 227,000 for the trainers and training material. As a consequence of its wood-supplier training courses and the resulting introduction of a supply-chain management system, Hape was able to win nine new suppliers, and has benefited

from improvements in product quality, as measured by first-pass rate and on-time delivery. From 2011 to 2015, the first-pass rate of a sample of five suppliers that received training increased from 80.7% to 86.1%.¹⁷ And from 2011 to 2014, the number of Hape's suppliers using water-borne paint increased from 11 to 21, to the benefit of workers and consumers alike. Through systematic supplier development, Hape was able to increase its purchasing volume from suppliers in Yunhe from USD 8 million in 2006 to USD 23 million in 2014. Looking ahead, these improvements in supply are vital for Hape's future growth, which can only be realized through an increase in high quality products from well-selected suppliers.

Thanks to the training of bamboo-farmers, which had one-off costs of USD 312,000 for the trainers and equipment, Hape was able to develop one new bamboo product. Unfortunately, the trained bamboo-farmers no longer work in the cooperative, and some have changed to a different industry. But Hape continues to collaborate closely with two bamboo-product suppliers in Anji, and purchases goods with an annual value of USD 1.1 million, thereby securing about 200 jobs with the suppliers.

Of course, the main beneficiaries of the wood-supplier training are the recipients – the suppliers themselves. The suppliers benefit from substantial safety improvements through improved awareness on the part of managers and workers, as well as from higher product quality and more efficient processes. These advances enable them not only to fulfill Hape's demanding requirements but also to win new clients. The incentives and pushes for continuous improvements, combined with Hape's best practices and cutting-edge technical knowledge, give the suppliers a competitive advantage over their competitors. This success shows how Hape goes well beyond the training activities of other companies, which focus more on soft skills for management and communication.

Community benefits: Creating and securing employment in the community

Regarding community benefits, the training courses for suppliers strengthen the local communities by securing and creating employment among suppliers, thereby benefiting workers and their families, as well as the community as a whole through higher consumption and tax receipts. There are spillover effects on other toy producers in Yunhe too: Hape's initiative has set new environmental, health and safety standards, as well as production standards, which other suppliers have to adopt if they want to avoid losing staff and revenue to more compliant competitors. In this sense the training courses have managed to improve working conditions locally, as well as closing skills gaps.

7.3 Costs and benefits of Hape's closing skills gaps in the broader community

Company benefits: Establishing Hape's brand and improving government relations

The costs of the Hape Experience Center amount to USD 441,000, while the costs of the bamboo kindergarten are included in the bamboo research center. Both initiatives were not primarily designed to yield a financial return but are aimed at contributing to local skills development. Nevertheless, the experience center and bamboo kindergarten do have an important marketing role for Hape through favorable media coverage. The initiatives' revenues cannot yet cover the running costs of the project – notably, the teachers' salaries. But the non-financial benefits are clear: reinforcing the Hape brand in the Chinese market, and thereby helping Hape in its aim of doubling its revenues by 2018 and becoming the number one toy brand in China. If the market response in Beilun is positive, the plan is to open new branches to spread the concept, and thereby increase the impact on skills development. In addition, Hape's relationship with local government and civil society in Beilun and Xingren has improved, thus reducing political risks such as the chance of local-government opposition to future investment projects. Note, too, that Hape China has a good reputation locally and its founder Peter Handstein has received the award of Ningbo Entrepreneur with most Social Responsibility from the local government, as well as a series of other honors. Finally, by further expanding the production base from China to Romania, Hape is also building bridges between governments, at both regional level (Avrig and Beilun) and national level (Romania and China).

Community Benefits: Closing the local skills gaps

Hape's community-development initiatives contribute to closing the skills gaps by providing education to more than 1,000 children in the less developed Xingren county – many of them from families of migrant workers with little school education. The vocational school makes a long-term positive impact on employment in the region and raises the perceived value of education. Additionally, Hape's kindergartens are helping to transform the approach to early-childhood education in the long term. The attention that the initiatives are receiving – from education authorities, parents, and other kindergartens – is very encouraging.

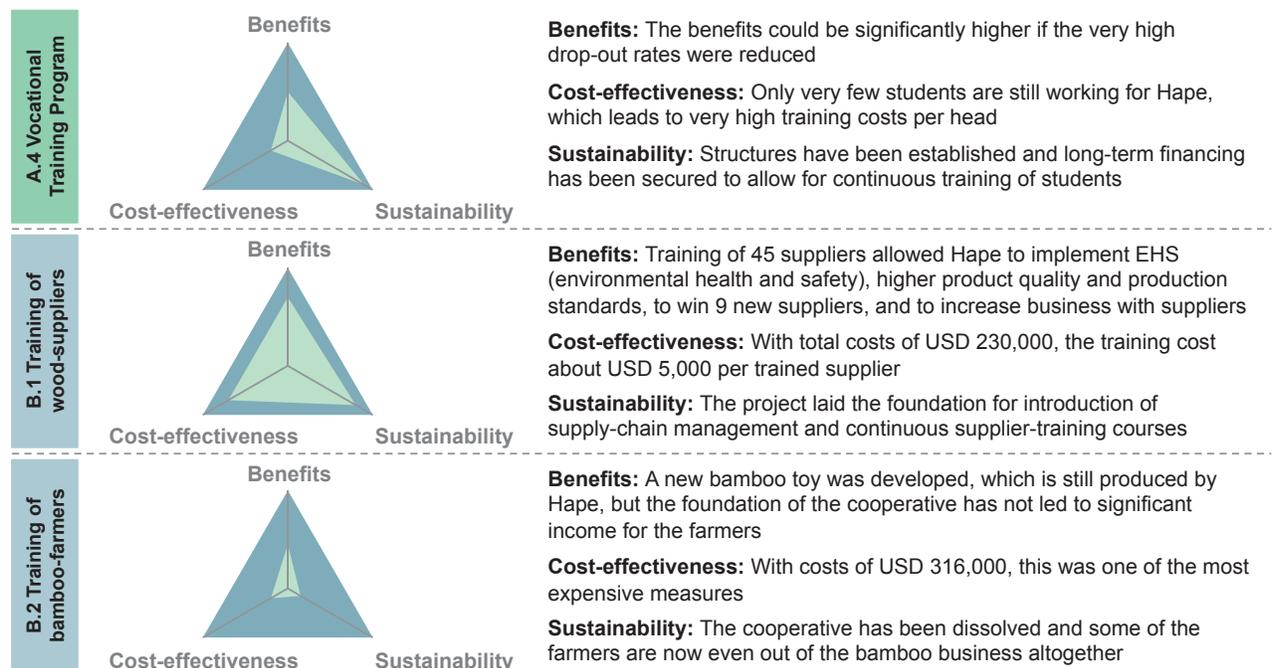
7.4 Overall assessment of costs and benefits

Figure 5 provides a summary assessment of three selected initiatives along three dimensions – benefits, sustainability, and cost-effectiveness. The size of the green triangle indicates the performance of an initiative along these dimensions: the larger the green triangle is, the better is the overall performance of the initiative. Looking at Hape’s vocational training first, you can see that the initiative ranks high in terms of sustainability, since structures have been established and long-term financing has been secured, but that there is still room for improvement with regard to benefits and cost-effectiveness, mainly owing to the high drop-out rates and subsequently high costs per trained worker for Hape. Therefore, the business case of the program is not yet positive. A comparison of the two supplier-training programs reveals considerable differences: the wood-supplier training program had far larger and more sustainable benefits than the training program for bamboo-farmers, which turned out to be relatively expensive without having a significant long-term effect.

Weighting the overall costs and benefits of Hape’s broad range of initiatives produces the following summary: Hape has invested heavily to address skills gaps on all three levels – within the company’s own current and prospective workforce, with suppliers, and within the local community.

The initiatives listed in Figure 5 have directly measurable one-off costs of USD 1.42 million and running costs of USD 95,000 per year – equivalent to about 1.5% and 0.1% of Hape’s annual revenues respectively. For this investment, Hape has been able to reap substantial benefits: through its workforce-development program, the company was able to upskill its employees, to increase productivity and retention, to fill management positions internally, and to train some highly qualified wood-workers for its production. Investment in suppliers significantly increased the quality and timeliness of inputs and broadened the supplier base. Finally, its investment in the local community helped Hape to promote its brand in China, to open up a new sales channel, and to foster good relations with local government. Some of these benefits are hard to measure, and most of them are even harder to quantify. However, they feed into Hape’s company values and its commitment to forming long-lasting relationships with its employees, suppliers and the community. Taken together, the overall net benefit of the initiatives does appear to be a positive one – even though some of the initiatives were implemented without the direct intention of producing a financial return.

Figure 5: Summary assessment of selected initiatives



8. Conclusion

Hape is taking a very broad approach to skills development – tackling skills gaps in its workforce, among its suppliers and in the wider community. The initiatives were not primarily intended to yield a financial return; they reflect the commitment of Hape and its founder to the development of employees and to fostering (early-childhood) education. Nevertheless, they have turned out to be very beneficial for the company as a whole, its employees, suppliers and the wider community.

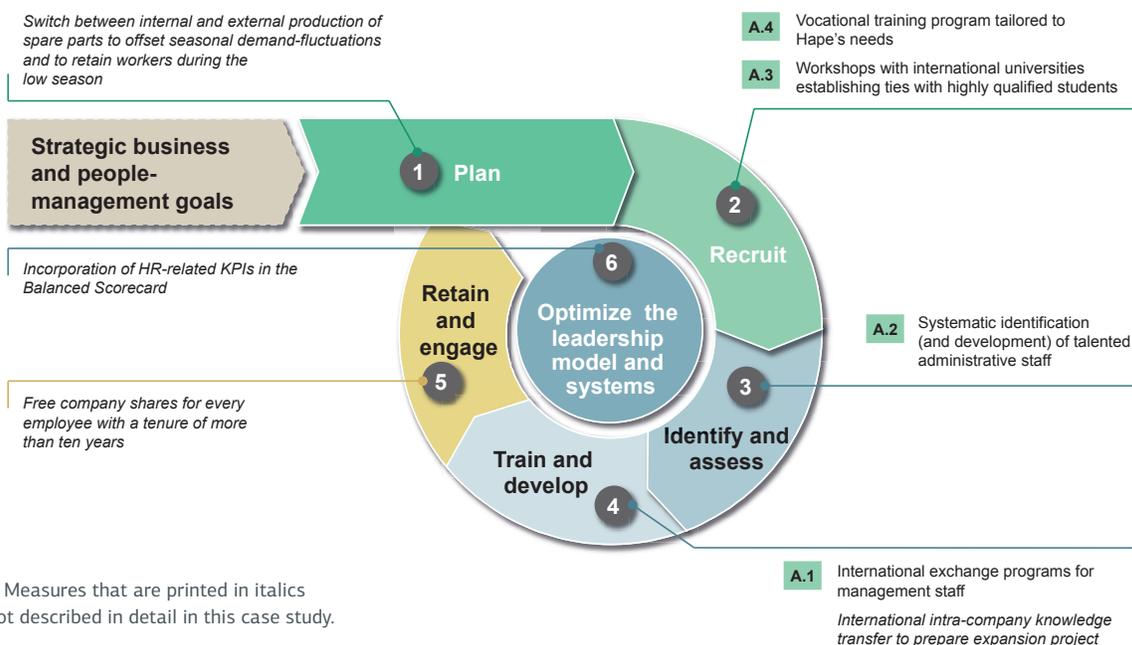
Good practices from Hape that can help companies close their skills gaps

From studying Hape’s many and varied initiatives, it is possible to identify several widely applicable good practices. Figure 6 presents an overview of these good practices for workforce development, related to topics ranging from planning to retaining and engaging employees.

Among these good practices, it is worth highlighting three elements that other companies could replicate or adapt to their specific needs and context:

- 1. Systematic evaluation and development of internal talent (A.2).** It is conducted through a transparent evaluation scheme (A, B, C logic) that identifies employees potentially suited for leadership positions. A broad-based evaluation by all department managers for A and B employees prevents line managers from clinging on to their talented staff; and the promising candidates are given the chance to carry out cross-departmental projects to gain company-wide exposure and knowledge (good practice 3.2 in the good-practice framework for workforce development described in Chapter 2.1).
- 2. Development of a vocational-training program (A.4)** with an established vocational school ensures the long-term supply of adequately skilled employees. It does so by developing a curriculum tailored to the company’s needs, by training the instructors accordingly, by undertaking to hire a large number of graduates, and by providing education to children from disadvantaged families (good practices 4.3 and 4.4).
- 3. Intra-company knowledge circulation (A.1).** It is maximized through international exchange programs for managers and through traineeships for new production workers in established facilities. Such schemes should function as disseminators of knowledge for new hires, especially when production expands to new geographical regions (good practice 5.5).

Figure 6: Overview of good practices from Hape’s workforce development



Key factors for improving the business case for Hape's vocational training

Hape stresses that the primary aim of its vocational training program is not to yield a financial return, but to contribute to the skills development of young people in the less developed province of Guizhou. All the same, some factors can increase the benefits for Hape and help to create a business case:

- 1. Minimize drop-out rates.** For the program to have a positive business impact, minimize drop-out rates by arranging open-doors days to provide information beforehand, and by establishing a mentoring system for the young trainees – especially in their third year at the company, since Hape only starts benefitting from the program in the third year and once the graduates join production. To this end, it is crucial to carefully monitor drop-outs and the various causes (good practices 5.3 and 5.5).¹⁸
- 2. Actively involve parents or guardians.** As the program is already established and has low running costs, one essential way to maximize the number of applicants is by ensuring that parents or guardians receive targeted marketing and information on the structure and benefits of the program. That helps to overcome the common skepticism of parents or guardians, who tend to favor more prestigious jobs for their children that may allow them to earn a salary right from the start.
- 3. Tailor the curriculum to the company's needs.** For the students to be a real asset to the company, tailor the curriculum to the company's needs, and ensure that the instructors themselves are carefully trained. Hape's own three-year training program, with its intensive training of the instructors, goes far beyond the norm in China, where many companies provide only one-month internships for instructors to get to know the company's requirements. Hape could go even further, and incorporate more toy-making practical exercises in the first two years (good practice 4.4).
- 4. Leverage the graduates' knowledge.** Offer a fast-track career for graduates of the program: that will make working at Hape more attractive to them, and will increase their value to the company by preparing them to become team leaders or foremen and perhaps eventually move to management positions (good practice 4.6).
- 5. Provide and advertise scholarships.** Ensure that scholarships are available, are well-publicized, and are administered quickly, in order that children with a weaker economic background can take part in the program (good practice 3.1 in the good-practice framework for closing skills gaps in the broader community described in Chapter 2.3).

Lesson learned from Hape

From an analysis of Hape's initiatives, it is possible to derive some lessons that might help other companies to address skills gaps more successfully:

- **Attrition is particularly high in the first few months, and needs to be addressed with specific measures.** Hape's experience shows that it is crucial to tackle high attrition in the first few months – for instance, by introducing open-doors days in production, implementing a shorter assessment of performance, offering attractive salaries to the new hires, and opening out a clear career path for them – one that integrates production with administrative functions (good practices 4.1 in the good-practice framework for workforce development described in Chapter 2.1).
- **Retention and integration of new hires within the company is essential.** In order to retain and quickly integrate new hires (especially migrant workers) into the company, a mentoring system for new hires could be introduced (good practice 5.5).
- **The quality of trainers is critical for successful training.** Trainers need to be carefully selected, and should themselves be trained to transfer knowledge from external experts (potentially international experts) to local personnel and to ensure that the relevant skills are taught and the training is sustainable (good practice 4.3).
- **The work should be appealing to aid the recruiting and retaining of workers.** In order to recruit and retain more qualified workers, the appeal of work in the wooden-toy industry needs to be enhanced – for instance, through increased automation. Note, however, that the increasing complexity of machines requires a different skill set and better trained workers, and that automation therefore impacts both on the demand for skills and on the supply of skills (good practices 1.4 and 5.4).
- **Training courses can create sustainable improvements in supply.** Training courses for suppliers should be introduced to create sustainable improvements in the quality and punctuality of supplies. Starting with the most important suppliers and issues, the training could then be rolled-out. The results of the training need to be monitored via clear and transparent indicators – such as first-pass rate, on-time delivery, and final-client complaints – and clear incentives and sanctions need to be established. Ideally, training courses are conducted on a regular basis, and are gradually extended to other areas such as HR or product development (good practices 2.2, 3.4, 4.4, and 4.5 in the good-practice framework for skills development along the value chain described in Chapter 2.2).

Executive Summary

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Notes

- ¹ Information provided by Hape. If no specific reference is given, information in this case study is based on information provided by Hape and/or based on expert interviews conducted in China and Romania in May and June 2015 respectively.
- ² The following exchange rates are used: 1 USD = 6.21 RMB; 1 USD = 0.91 EUR.
- ³ Euromonitor (2015), Toys and Games Database.
- ⁴ Ibid.
- ⁵ Dannwolf, U., Ulmer, F., Cooper, J., Hartlieb, S. (2011), Chemicals in Products: Toys Sector Case Study for UNEP, Dialogic and Dekra Report.
- ⁶ OECD (2010), Learning for Jobs. OECD Reviews of Vocational Education and Training: Options for China.
- ⁷ World Bank (2014), China Economic Update – June 2014.
- ⁸ McKinsey & Company, Inc. (2013), The \$250 billion question: Can China close the skills gap?.
- ⁹ International Monetary Fund (2013), Growth Slowdowns and the Middle-Income Trap.
- ¹⁰ Boston Consulting Group (2014), The Global Workforce Crisis: \$10 Trillion at risk.
- ¹¹ Economist Intelligence Unit (2014), Still making it – An analysis of manufacturing labor costs in China.
- ¹² Boston Consulting Group and the Network (2014), Decoding Global Talent.
- ¹³ Boston Consulting Group (2012), Four Ways to Stop Worrying About Talent in China
- ¹⁴ Guizhou's GDP per capita is USD 4,244 – significantly lower than China's average of USD 6,807. World Bank (2014), World Development Indicators 2014; DB Research (2015), China Chartbook – Guizhou.
- ¹⁵ Lego Learning Institute (2010), The Future of Play: Defining the Role and Value of Play in the 21st century.
- ¹⁶ Measuring the business impact of innovations requires an analysis of the entire innovation-to-cash process (all efforts to turn an idea into cash), with metrics for innovation inputs, processes, and outputs. Assessing the benefits of innovation is a cumbersome task: a study by BCG has shown that only 32% of executives are satisfied with the innovation-measurement practices in their company. See Boston Consulting Group (2009), Measuring Innovation 2009: The need for action.
- ¹⁷ Quality problems, such as sub-standard coloring, often resulted from a faulty understanding of Hape's quality requirements. Furthermore, poor on-time delivery rates required Hape to maintain larger stocks so as to avoid production delays.
- ¹⁸ Note that after the training was reformed, Hape's retention rate increased significantly. From 32 students who started in 2012, 26 reached their third year and are now working with Hape in Beilun. Six months before the program finishes, the graduation rate is expected to be very high.