

“YOUNG PROFESSIONALS”

1. Organisations involved

Siemens Transportation Systems, Graz, Austria

The Diversity Consult Network, Graz, Austria

2. Description of the case

2.1. Introduction

Siemens Transportation Systems in Graz is the world's leading engineering and production plant for the manufacture of bogies for trams, underground trains and locomotive vehicles. About 1000 employees produce approximately 3000 bogies a year for operation around the world. If one travels by DESIRO in Great Britain or by underground in Melbourne, Australia, one can appreciate the comfort from bogies made in Graz.

Due to the highly specialised nature of its manufacturing activities, the company places special emphasis on the training and education of about sixty apprentices a year, as highly specialised certified welders, steel construction workers, electricians, lacquerers, mechanical engineers, material testers and bogie constructors.

As the main age group of apprentices is between 15 and 19, these young people are confronted with not only having to cope with their own individual development but also with the demands of the workplace. Teenagers attending school generally receive support from teachers and the education system, such as through health education, training of personal skills or sports. Apprentices, however, are exposed to additional work-related stress and consequently show significantly different health behaviour characteristics than those of school children. An evaluation report on the health and health behaviour of apprentices in Vienna¹ demonstrates, for instance, that apprentices are far more prone to suffer from certain forms of health problems than school children of the same age. Compared to the latter, apprentices are more likely to have psychological problems such as depression, drink more alcohol, smoke more excessively or even take illegal drugs. Studies have shown that the incidence of smokers in the apprenticeship group is ten times higher than that for school pupils of the same age. It has also been demonstrated that apprentices are in general physically less active than teenagers within the education system. Physical tests of apprentices carried out for the “Young Professionals” project by the Institute of Sport Science at the University of Graz showed that apprentices, who were tested for muscle force and flexibility, sprinting ability and coordinative skills, performed relatively poorly.

2.2. Aims

Due to the special situation of apprentices and the demands of a modern workplace, the main aims of “Young Professionals” were:

- To raise awareness about health and to improve health behaviour for teenage apprentices;

¹ MA-L/Dezernat für Gesundheitsplanung: Gesundheit von Lehrlingen in Wien, Statistische Mitteilungen zur Gesundheit in Wien 2001/1

- To communicate to their instructors and management the importance of improving the health behaviour of apprentices, not only for the trainees themselves, but also for the good of the company as a whole;
- To promote various health themes at the workplace, according to the needs of apprentices and implement a training scheme;
- To meet the demands of a modern enterprise through motivated and creative employees by creating a system in which apprentices can actively participate, take responsibility for their activities and make a contribution towards developing a healthy and supportive working environment in accordance to health promotion standards at the workplace;
- To design and create a sustainable and attractive model of a quality management system suitable for educating and motivating young apprentices with regard to health-related issues and developing a positive attitude towards the subject.

2.3. *What was done, and how?*

Defining the status quo

In order to define the status quo at the workplace concerning the resources and restrictions for a healthy working environment, the Swiss SALSA questionnaire (Salutogenetic Subjective Analysis of the Work Place) was adapted and an inquiry was carried out into the attitudes and opinions of the apprentices and the instructors.

An important aspect in this regard was by requesting the apprentices and their instructors to evaluate their feelings towards the workplace, such as working areas, meeting rooms, the canteen, changing rooms and so on. The questions were formulated in such a way that the participants were encouraged not only to state what they liked or didn't like about a particular area but also the reasons why. Their answers were highlighted and documented both in writing and in photographic form by the participants themselves. This form of self-assessment allowed apprentices and their instructors to take a more active role and illustrated the benefits of a participative approach to health promotion in a very positive manner.

From this basis, the areas for improvement were defined.

Implementation of a participation system for apprentices

According to the Salutogenesis² theory, the central role was to implement a participation system for the apprentices, so they were able to define for themselves what conditions are necessary for a healthy working environment.

This was accomplished by the formulation and introduction of:

- Experience Exchange Groups comprising the apprentices and;
- Quality Circles comprising delegates appointed from apprentices, their instructors and managers.

The Experience Exchange Groups as well as the Quality Circles held scheduled meetings every month for one and a half hours. The Diversity Consult Network chaired both meetings.

The Experience Exchange Groups were developed to deal with the problem of apprentices not being used to actively participate at the workplace. Therefore, they served as training units designed to impart an understanding for health issues and workplace improvement and to enhance the creative capacity of the apprentices. The apprentices were empowered and encouraged to exchange their

² <http://heapro.oxfordjournals.org/cgi/content/full/23/2/190>

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experiences concerning the workplace and the team, and define and put forward possible improvements.

The Quality Circle is a committee set up to resolve and organise the required improvements or changes. In order to achieve this goal, it is necessary to involve management, union representatives and expert personnel such as paramedical staff.

Training the basics of health and health promotion at the workplace

Alongside the participation system, a seminar programme with a wide range of health themes, from the fundamental principles of promoting health to teamwork and leadership was carried out.

The topics covered were:

- Introduction to health promotion (Salutogenesis theory);
- Food empowerment;
- Your money or your life or How to organise your money;
- Outdoor team training;
- A smoke free workplace;
- Body and sexuality;
- Personality development and “soft” skills: presentation skills, conflict management, liability, responsibility and leadership.

In cooperation with the Institute of Sport Science of the University of Graz, a regular sport programme for the apprentices and instructors was designed. The Institute of Sport Science carried out physical fitness tests on the apprentices and inspected the type of work done at workplaces in order to design a general sports programme. This resulted in:

- A weekly one and a half hour sports education session for the apprentices and their instructors and;
- A daily 10 minute exercise break.

The biggest challenge was to design courses for adolescents that included alternative methodology, such as outdoor training and interactive activities so that experience and learning is gained by “doing” rather than give instruction in a formal classroom atmosphere.

Health topics as well as a regular sports programme are generally regarded as not attractive by teenagers and for this reason special measures were necessary. This situation was met by designing the seminar programme together with the apprentices, informing the apprentices that the sport sessions and health seminars were an essential and integral part of their curriculum, carried out in working hours and emphasising that they should be regarded as part of the working day. In order to make these points clear, it was necessary to enlist the support of the management. It was also deemed important that the instructors took part in the sport programme, so that they could be looked upon as positive role models to inspire an interest for health and physical activities. Therefore the instructors participated in all the seminars and the sports programme.

Accompanying evaluation and feedback

Structured feedback for apprentices and superiors was collected and reported annually using specifically designed, tailor-made questionnaires. The resulting feedback was analysed and used for introducing improvement measures.

The accompanying external evaluation was carried out by social scientists from the “ZBW” (Centre for Education and Economy) which reported to the project team every six months.

The external evaluation concerned all the essential elements of the “Young Professionals” project. The concept as a whole was assessed as well as the process and the results.

For these purposes, the evaluators carried out an analysis on the documentation and interviewed apprentices and key personnel who were also requested to complete annual questionnaires. The results of this assessment were used as the basis for the introduction of preventative and corrective measures.

Public relations and lobbying

Public relations also played a central part in the project because one of the goals was to enhance awareness for health, health promotion and quality management with regard to the education of apprentices and to establish Siemens Transportation Systems in Graz as a model of good practice. For this purpose, regular articles in newspapers and magazines were published, and public events for the company, presentations to politicians and stakeholders, as well as general lobbying activities concerning health issues were organised.

Transfer

To support the transferability of the model for educating apprentices, a “Young Professionals” manual and a short image film was produced.

2.4. What was achieved?

- A positive change of attitude towards health and health behaviour from the apprentices. After the project, around one third (among the 2nd to 4th year apprentices around 50%) of the apprentices has changed their attitude in one or more programme topics.
- An improved physical condition of the apprentices due to the implementation of a regular sports programme within working hours. In addition, half of the participants state that they have changed their behaviour in the field “sport and exercise”.
- Improvements at the workplace including:
 - Offering healthy meals in the factory canteen and providing fruit and fresh water at the workplace;
 - The creation of a smoke-free working environment along with defined smoking areas.
- The implementation of regular seminars and workshops as a means of further education concerning health for the apprentices and instructors.
- The development and training of new participative leadership skills for the instructors.
- The improvement in the training for apprentices. This was especially the case for the welding and mechanical engineer apprentices and this was considered by all concerned as a major achievement. The story about the welding apprentices is described in the section “Success Factors”.
- The sustainable integration of female apprentices into a previously 100% male working environment in the bogie production.
- The design and implementation of a participation system and quality management education for the health enhancement of the apprentices.
- Raising awareness for health promotion and quality management of apprentices and establishing Siemens Transportation Systems Graz as a model of good practice by:
 - Presenting and distributing the project results at various production plants in Austria and Germany and for social partners such as employers, unions and politicians in Austria;

- Having the whole project evaluated by external social scientists. The evaluation reports are available in German at http://www.fgoe.org/projektfoerderung/gefoerderte-projekte/FgoeProject_286982/951766 and http://www.diversity-consult.net/Ypro/evaluierungsbericht_01_2006.pdf ;
- Producing the “Young Professionals” manual and a short promotion film in 2009 which are available in German.

2.5. Success factors

The main success factors for the project are:

- The fact that the project “Young Professionals” was based on the scientific concept of Salutogenesis as defined by the socio-medical scientist A. Antonovsky and the World Health Organisation. In the work an interdisciplinary approach was followed by combining elements such as health promotion, quality management, sociology and developmental psychology. Antonovsky describes three important factors with regard to a sense of well-being. These are:
 - Having the feeling that one is in charge of one’s life (“I can handle it”);
 - Being confident about the future and what is going to happen and;
 - Feeling that one’s life is meaningful.
- The active participation of the apprentices throughout the whole project in defining for themselves the major health themes and introducing suitable measures with the aim of developing a sense of well-being. This is of paramount importance. Empowerment and a resulting sense of well-being engenders a healthy outlook and is in itself a major contributory factor in preventing the onset of developing adverse psychological and physical symptoms.
- The fact that the education and training of the apprentices was conducted together with their instructors and superiors. This not only assisted greatly in illustrating that the health topics covered were considered important for the company as a whole, but also served as an invaluable tool for information exchange between managers, instructors and the apprentices. This was of benefit to the company *and* the apprentices, as the following success story highlights:

In the past, the in-house “training” for welding apprentices in the company comprised the theoretical aspects of the work and visits to the welding areas for the manufacture of bogies. This work requires extreme concentration and accuracy, where a mistake could prove to be very expensive especially as bogies have a guarantee period of 30 years and in the worst case scenario could cause loss of life. For this reason, it was no wonder that the qualified welders were very reluctant to allow a teenage apprentice to perform any of this work. It was generally assumed by the instructors and management alike that the apprentices received “hands-on” experience from his or her time in the welding department. Understandably, the young ambitious people concerned were very dissatisfied about this state of affairs. Often, when they complained to their instructors, they were not taken seriously and/or simply not believed.

However, in the course of the Diversity Consult Network training meetings, during which apprentices were empowered and encouraged to freely voice their opinions, their grievances were taken seriously and the welding apprentices were asked to formulate their own solution to the problem. The would-be welders took up the challenge and were rewarded by finally being allowed to gain valuable practical welding experience by using waste metal. The apprentices concerned even constructed their own welding protective shelters and practised using space previously designated as a “welding school” but was for many years redundant and utilised as a storeroom. The story is all the more remarkable as the apprentice welders won each of the bi-annually held welding competition of apprentices in the province of Styria since.

- Involving interested parties within Siemens Transportation Systems (managers, heads of various departments, union officials etc.) in the project, especially in developing suitable measures.
- Putting a strong emphasis on the social and political relevance of health promotion and quality management for the education of apprentices through media-articles, public presentations and discussions with politicians and social partners.
- Having the benefit of external evaluation and regular feedback from an independent organisation. This was an enormous asset for a project such as this.
- Creating an atmosphere in which apprentices were confident enough to speak freely to their instructors and members of management.

2.6. Further information

The “Young Professionals” project was designed, implemented and accomplished by Ms. Michaela Strapatsas from the Diversity Consult Network for educating apprentices at Siemens Transportation Systems, Graz, Austria.

The project was co-financed by “Fonds Gesundes Österreich” and the province of Styria government.

The final report is available in German at http://www.fgoe.org/projektfoerderung/gefoerderte-projekte/FgoeProject_286982/951766.

The whole project documentation can be found at http://www.diversity-consult.net/ypro_dokumentation.html.

2.7. Transferability

During the whole project special emphasis was laid on transferability. Therefore a sustainable quality management system was created, tested and implemented for promoting the health and the well-being of apprentices at the work place and incorporated into the company’s education curriculum.

The modules of the system are transferable and easily adaptable for smaller or bigger enterprises.

Separate measures were taken for raising awareness of health issues for apprentices and their special situation as well as for the distribution of the quality management model based on the results of the “Young Professionals” project. These include:

- The creation of a “Young Professionals” manual and a short image film;
- External evaluation reports and general reports, which are readily available and;
- Various press releases and public presentations.

3. References, resources:

- Fonds gesundes Österreich, Projektberichte. Retrieved 30 October 2009, <http://www.fgoe.org/projektfoerderung/projektberichte> (final report)
http://www.fgoe.org/projektfoerderung/gefoerderte-projekte/FgoeProject_286982 (abstract)
- Diversity consult, Projekte zur Gesundheitsförderung. Retrieved 30 October 2009, <http://www.diversity-consult.net/healthprojekte.html>.