



VOCATIONAL TRAINING OF PEOPLE WITH DISABILITIES IN INFORMATION TECHNOLOGY SKILLS - CONCLUSIONS FROM PRACTICAL EXPERIENCE

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1. ABSTRACT

The application of information technology into all aspects of life, particularly the worlds of business and commerce, seemed to offer exciting vocational opportunities for people with disabilities. A number of initiatives across Europe have been set up to realise these opportunities. It may be clearly observed that the services that provide lasting, effective solutions are those that seek to provide vocational rehabilitation as part of an entire rehabilitation programme targeted at the the specific needs of the individual. This paper draws on practical experience and observations from a number of such initiatives throughout northern Europe, and outlines some basic principles for vocational rehabilitation, built into a rehabilitation strategy.



2. STUDY

The principle programme that provided material for this paper is the vocational training course offered to people with physical disabilities or suffering from mental illness that the author directed from 1984 to 1989 at Reading Information Technology Centre. This course was created to provide data for the "West Berkshire Interface" project, which was part of the EC network of "District Projects", established in 1983 by the Commission of the European Communities, Directorate General V, to promote social and economic integration of disabled people [1]. During the duration of the interface project, the author had the opportunity to visit or confer with staff from a number of similar training schemes, rehabilitation centres and related research projects throughout Europe. This resulted in an understanding of the issues, which is not based within the culture of one local situation but rather reflects the issues common to all people requiring vocational rehabilitation.

The training scheme offered at Reading ITeC provided training for small groups of young adults who had left school and required vocational training before gaining employment, or who had become disabled later in life and required retraining in order to return to work. Each trainee received individual tuition covering skill areas required by that individual in order to gain employment in a field appropriate to him/her. Course lengths varied according to the needs of the individual trainee, so that, as each trainee left the course, he was replaced, thereby ensuring a constant through flow of trainees, with a maximum of 10 at any one time. Courses covered a number of core IT skills, followed by training in areas such as word processing and office skills, accounts, stock control, data base techniques, graphics and desktop publishing. Each trainee received a period of work experience and vocational qualifications were offered wherever appropriate.

The course was funded by the UK Manpower Services Commission (MSC), now the Training Agency. Trainees received a training allowance whilst on the course, and the ITeC was paid by the MSC according to the numbers of the trainees on the course, on a weekly basis. On average, 25 trainees completed a course in a year, and the total cost to the MSC per year,



including trainees' benefits and ITeC costs was approximately £100,000. The cost charged by the ITeC covered the material and equipment needed for the training, the use of ITeC facilities, and the cost of 2 trainers, or 1 trainer for every 5 trainees.

3. RESULTS

The progress of trainees applying for the training course was followed from July 1984 when training commenced, until October 1987 when the Interface project ended. (The course however has continued to be offered as an established local provision for local disabled people.)

In this period

- 125 applied for the course;
- 22 dropped out before interview;
- 26 were not offered place;
- 2 did not finish the course;
- 17 completed the course but had no employment at the end of the period (some found employment later)
- 37 found Employment
- 10 were still in training at end of the period referred to in this study

Therefore, 68.5% of those that completed courses found employment.

These figures were monitored throughout the period, and were subsequently carefully analysed to discover the causes behind them. This process involved analysis of the situation of each trainee, including an attempt to see how unique or average their experience had been. In addition, throughout the duration of the period of study, similar or relevant experience in other appropriate organisations was adopted wherever appropriate.

According to the cost of the course per year, the cost of placing a trainee in work was,

$$100000 / 25 = £4000$$

Because 68.5% found employment following the course, the money could only be recovered from the taxes subsequently paid by these people.

$$100000 / (25 \times .685) = £5840$$

In many cases this money could be recovered in 3 years (taking 25 % income tax on an income of £8000 per year), and represented a saving in benefits and special provisions over the same period of up to £24000 per trainee.

4. OBSERVATIONS

The observations given below represent some of the findings from the study at the ITeC.

4.1. Impact of disability

Disability results when an individual loses functionality to such an extent that the remaining functionality is measurably impaired in relation to the average for the population as a whole. The consequence of this disability is that individuals become handicapped in what they attempt or aspire to do. Because the handicap depends on the context and the potential for the situation to accommodate the disabling effect of the impairment, each individual with a non unique disability nevertheless experiences the handicap in a unique way. In addition, those with whom they share their life, and those who are involved in their care or assistance are invariably confronted with situations that are new or unique in their experience. Although disabilities may be classified as consequences of impairment in order to assist the provision of services, the handicap experienced by each person with disabilities can only be described as a set of handicaps uniquely mixed in each situation.

This statement recognises the diversity of cause and effect of the impairments that cause disabilities, coupled with the fact that the numbers of individuals experiencing any given disability may be very low in any given population, despite the fact that the total number of people with disabilities in a given population is significant; currently estimated to be around 10%, giving a total number of 30 million within the European Community.

In order to enable the appropriate identification of assistance for each individual, the rehabilitation process has been recognised as covering 3 distinct phases or stages:-

Stage 1 - Treatment

Stage 2 - Readjustment

Stage 3 - New Orientation

In each of these phases, 6 distinct issues occur considered in parallel, each of which has an influence upon the rehabilitation. These issues are:-

Economy/Law

Home

Psyche

Body

Network/Spare time

Work

The onset of disability has, therefore, profound implications for the whole of the life of the individual, and has consequences for those with whom they interact. Many observed difficulties are due to individuals moving from one stage to the next in the rehabilitation process when all the other issues have not stabilised or been addressed.

4.2. Provision of services

As an individual moves through the rehabilitation process, too often the transition from one provision to the next resembles the experience of someone trying to cross a river using "stepping stones". Rarely is an individual able to get an overview of the potential provisions available to him, or to gauge the effort required to move from one provision to the next. As a result, inappropriate choices are made, resulting in disappointment, failure and the need to go back to an earlier point in order to start again in a new direction. In addition, choices are often made on behalf of the individual by service providers relative to funding and availability of places or people rather than their needs or aspirations.

4.3. Vocational rehabilitation strategy

Applying these issues to the field of vocational rehabilitation, the following strategy (figure 1), has been devised. The philosophy behind its development is that it should provide a smooth and secure path through which individuals may achieve their maximum potential. It caters for the various training requirements of a wide variety of people by allowing a flexible approach to the method and site of the training; the methods and site should be chosen to suit the needs of the individual. The 5 phases in the strategy outline a logical sequence through which the



courses are matched to the trainees, they receive the training and have the opportunity to practice the new skills before seeking a job.

This strategy describes a local training scheme, serving people attending training on a daily basis. There is provision within the implementation of the strategy for the related issues which pertain to the individual to be raised (eg. mobility to and from work, fatigue, pain, transition from benefits to wages or salary, further health issues that only become apparent when the individual resumes an active life, etc.). Some people with disabilities would prefer to be trained in a conventional course rather than a special scheme; this has been found to be successful for only a minority of people, because the structure of such a training scheme does not allow room for these other issues to be dealt with, and because many colleges are not currently able to deliver training to those trainees with sensory, speech or severe motor disabilities.

4.3.1. Phase 1 - Assessment

Good assessment is the key to successful vocational rehabilitation; the only common factor that describes potential trainees is that they have some personal experience of disability and in all other respects may be distinctly different, one from the other. In most cases, individuals are only able, allowed by the system, or prepared to go through a vocational rehabilitation scheme once. If the chosen route proves to be inappropriate, there is often nothing that can be done to redeem the situation, not least because of the emotional trauma of unrealised expectations that the disabled person experiences.

Successful assessment has been found require the three key elements of:-

- Tests - To find the current level of ability of the trainee.
- Work samples - To find the potential ability of the trainee
- Counselling - To find what the trainee wants to do
To advise the trainee

Relative abilities may be discerned if all potential trainees follow a battery of tests and work samples covering general skills. The additional benefit of this method is that it reveals latent



skill areas unknown to trainee or assessor. Counselling provides an opportunity for dialogue between trainer and trainee, enabling specific pragmatic vocational choices to be made.

4.3.2. Phase 2 - Training

Because of the speed of progress and change in the application of IT, training schemes and material must evolve rapidly to continue to provide up-to-date training in the skill areas that are required by potential employees. If a scheme for disabled people allows to training to a high standard, using the latest equipment and software, the trainees automatically have skills that are unavailable from virtually any other source. This requires the resources necessary to keep the equipment levels of the training centres current, but virtually guarantees employment for many of the trainees. This is further enhanced if recognised vocational qualifications are achieved by the trainees.

As the needs and, therefore, the courses for the trainees are different, it is helpful also for the duration to be flexible; a length of 9 months in a field has been found to be optimum.

It has been found that, regardless of the quality of the training and the achievements of the trainees, some have not found employment because employers are not prepared to risk having to pay reasonable salaries to a middle aged person who has become disabled, but has no experience in the field. A solution for 10% of the trainees has been a further 6 months or 1 year of practical "on-the-job" training, enabling them to prove their competence to prospective employers.

Some trainees may be unable, for reasons of physical or mental robustness, to consider open or sheltered employment, but may have to work from home. This has been demonstrated to be a solution that may work for some eventual employees and employers.

4.3.3. Phase 3 - Work Experience

All trainees have been found to benefit from the opportunity to practice their new skill in a representative environment in order to build their confidence before seeking employment. In rare cases this opportunity was provided towards the beginning of the course in order to

confirm the validity of the chosen career.

4.3.4. Phase 4 - Placement

Many employers today are enthusiastic about employing people with disabilities, and would like to see integration in the workforce, so the problems of finding work for people with disabilities are decreasing, particularly as they are able to demonstrate ability in areas of skill shortages. A system was installed to monitor local vacancies which were followed up quickly, and some liaison provided if there were practical issues that need to be addressed, such as access into older buildings, or flexible working hours. One key issue was that all trainees had the opportunity to practice the process of finding work. This was found to be particularly important if their previous work has been casual or manual, as the techniques and approach may be quite different.

4.3.5. Phase 5 - Employment

It has been popular to consider that integration is only complete when individuals are seen to be placed in open employment. This denies all other areas where the individual may be seeking integration, particularly socially and economically. The individuals were allowed to settle in the mode of employment that best suited their needs, ranging from working at home, to full open employment.

4.4. Integration of provision

The clear recommendation that has come out of the experience of all people working in the field, and particularly from those who have undergone vocational rehabilitation, is that no provision can be viewed as an island. Vocational rehabilitation is a complex process, where traditionally the individual has been moved from stage to stage by well meaning but often badly informed or misguided "professionals", with little knowledge of the careers about which they are advising. As the cost of rehabilitation rises, and the need for a trained workforce increase, it was recognised that all the actors in the field must work to co-ordinate their provisions so that the path from one to the next is made as smooth as possible. A system that would probably facilitate this would be the setting up of bimonthly or quarterly local review forums to update all the actors of new developments and how they affect the trainees and the local service

providers.

The other principle recommendation is for the knowledge of what is available to be disseminated to the potential users of the services. Many people fail to receive successful vocational rehabilitation because they cannot find the basic information about availability of courses, availability of grants etc. This must be addressed, preferably through a central information provider that is respected and known to those who experience a disability

5. CONCLUSIONS

The implications of the ITeC experience have been used to raise issues for those working in the field of vocational rehabilitation. It is important to note that the improvements that were experienced in this field resulted from the co-ordination of all the relevant actors. Vocational rehabilitation is the example used to illustrate this point, but it is equally valid for any other area of rehabilitation from the design of a technical aid in a university to the provision of smart houses for independent living.

6. REFERENCES

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Vocational Rehabilitation Strategy - Training in Applications of Information Technology

