Summary Table 4: ICT and ICT-AT & EMPLOYMENT

Research Papers

Citation	Topic	Research design	Results	Conclusion	Link
Andrich, R. (2013). European Thematic Network on Assistive Information and Communication Technologies. Project final report. 2013. Consortium of 23 European organisations. Centre for Innovation and Technology Transfer (CITT) Fondazione Don Carlo Gnocchi Onlus. Italy.	the creation of a ***European Web Portal*** able to connect and disseminate all information and expertise in assistive technologies (ATs), especially those based on Information and Communication Technology (ICT), to ensure access to ICT assistive equipment, systems and services	Consortium workshops: mapping information needs, mapping web resources available in Europe in relation to ICT AT products and e-accessibility solutions etc. Lectures, plenary discussions and team-work aimed at identifying common methods to classify the key features of ICT AT products and e-accessibility solutions Inter-disciplinary dialogue Each partner carried out public activities to spread information on the project and its	Taxonomy (identifying / naming concepts and arranging them into classifications) of the key features of ICT AT products and e-accessibility solutions An on-line information system providing information on assistive products based on e-accessibility solutions which are available in Europe, and on related organizations and services http://www.etna-project.eu/ http://www.eastin.eu/en-IE/searches/products/index	Internal impact within each partner Institution: It helped exploit the internal expertise and human capital, and initiated a mutual enrichment process that led to a well-established collaboration, willing to continue even after the end of the ETNA project. External impact: to grant every citizen with disabilities access to AT knowledge at the desired level in relation to his or her information need, in a user-friendly and affordable way	http://www.etna-project.eu/ftp/ETNA_DELIVERABLE_D1_12_FinalReportPublishable.pdf

		results at national or local levels Development work for search engine User experience ratings and comments	http://collaborativeportal.atis4all.eu/en-GB/default.aspx		
Gresswell A. & Evert-Jan Hoogerwerf E.-J. (2007). (eds.). Guidelines for Lifelong Learning in Assistive Technology. Communication, computer access and environmental control. Keeping Pace with Assistive Technology (KPT) Project. Italy.	AT-supported life-long learning of disabled and elderly people: to provide a flexible framework for designing learning programs; designed for the professional development of those with a direct contact with the potential users of AT	written report	Manual for planning AT-supported learning programme	Learner-centred framework for planning learning program	https://www.google.com.cy/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB8QFjAA&url=http%3A%2F%2Fwww.at4inclusion.org%2Fkpt%2Fbook%2Bguidelines_ENG.pdf&ei=Hd1oVf_nFoHeU72ZgJAJ&usg=AFQjCNGrhKGQ118qieSsU9KoTfQNsXfkkQ&bvm=bv.94455598,d.d24
The ATLEC. 2012. Assistive Technology Learning Through A Unified Curriculum.	The aim of the ATLEC project is to analyse the use of ICT-AT by people with disabilities, and	Statistics On-line focus-group survey aimed at distinct stakeholder groups including	Unsurprisingly there is a wide variance in the fields of employment, education and independent living	Analysis of the results from the online survey, combined with the results and comments from the focus groups indicate that there is a **need to provide**	http://atlec-project.eu/

Greenhat Interactive Ltd, PhoenixKM BVBA. Belgium, Greece, Italy, the UK	to examine the training they received that enables them to use it. Following on from this, a curriculum will be developed to enable people with disabilities to become trainers in the use of ICT-AT.	parents/carers, end-users, ICT-AT providers, staff within support agencies, educators and policy makers 978 respondents in total, of which 396 have answered all questions, while 582 have answered parts of the survey Focus groups nationally: UK and Italy to support disabled persons to respond	relating to people with disabilities and in the legislation frameworks that support them, across the ATLEC partner countries. These affect the provision, funding, take up and training relating to ICT-AT accordingly. With this in mind, the survey that was undertaken attempted not only to capture these differences, but also to gain an insight into what is needed to increase the opportunities that people with disabilities may potentially have with improvements in key areas. People with disabilities feel that receiving training to enable them to more effectively use the ICT-AT would	**training to people with disabilities to improve their ICT-AT skills and competences**. **Training is not usually currently provided by people with disabilities themselves**. Overall the survey has confirmed the **need for a unified but flexible and variable training curriculum** to improve people with disabilities' employability and to increase their potential to become experts or even trainers in the field of ICT-AT.	

			improve their employability. **However**, this was not seen as a key reason for using ICT-AT, as the survey showed that **the majority of respondents use their ICT-AT to improve communication and therefore become more independent**. Within some of the focus groups, there was a feeling that the best people to train individuals in the use of ICT-AT were either the manufacturers of the equipment, due to their expert knowledge, or someone with a disability who already uses the equipment.		
Sauer, A., Parks, A & Heyn, P.C. (2010). Assistive technology effects on the employment outcomes for people	This systematic review examines the effects of assistive technology (AT) use on employment	A literature search was conducted to examine the evidence supporting AT use in the workforce. Search criteria	AT interventions demonstrated **positive outcomes on job performance**. Positive outcomes were measured as a	Future research should focus on producing evidence to support the use of AT tools for this population, and provide guidelines for incorporating them in	http://www.ncbi.nlm.nih.gov/pubmed/20392190

with cognitive disabilities: a systematic review. Disability and Rehabilitation: *Assistive Technology, 2010*; Early Online, 1–15	outcomes for people with cognitive disabilities (CD).	included: subjects with CD, use of an AT tool or device and participation in a vocational training program or active employment. The search results yielded nine articles focused on AT interventions used in vocational settings for people with CD. The Cochrane Collaboration Hierarchy of Evidence was used to assign a level of evidence to each study. Three key terms: (1) cognitive disability, (2) AT and (3) employment: 369 searches	**higher rate of accuracy and task completion, increased independence and generalization of skills**. We found a trend in the literature over the past 25–30 years, moving from low- to high-tech visual and auditory cuing systems	vocational training programs in schools and community settings.	
Yeager, P., Kaye, H. S., Reed, M. & Doe, T.M. (2006) Assistive technology and employment: Experiences of Californians with disabilities. *Work, 27*, 333-344.	A participatory action research project known as Community Research for Assistive Technology surveyed people with disabilities	Participatory Action Research (PAR) to explore the question, "Is Assistive Technology effective for people with disabilities in the areas of health, employment, function, Independent	Across disability groups, disability itself was cited as the primary barrier to employment, with potential loss of benefits and lack of education cited as secondary barriers. A majority of	Given the striking finding that most respondents viewed their own disability as their primary barrier to employment, we suggest that disability employment policy focus not only on secondary barriers, such as benefits-related work disincentives,	http://www.ncbi.nlm.nih.gov/pubmed/17148870

using Independent Living Centers throughout California, in part to identify barriers to employment and study use of job-related AT to overcome such barriers.	Living and community integration?" The survey that forms the basis for this research was developed through an extensive qualitative and semiquantitative research process. After the topics of highest priority were identified,focus groups of AT users were held throughout California to discuss those topics. Forty-three focus groups involving 333 participants were held, each lasting between 90 minutes and two hours. The project then shifted into the quantitative arena. As a result of the difficulty in recruiting respondents, the high rate of missing responses to some items, and the apparent exclusion of respondents with lower educational	working respondents reported using assistive technology (such as adapted telephones, wheelchairs, magnifiers, and adapted computer equipment) or services to perform job functions. The vast majority of those using job-related AT reported substantial benefits to their productivity and self-esteem. Employees' requests for AT as a workplace accommodation were granted more often than not, but many other employees had to pay for their own workplace AT	lack of education, and negative employer attitudes, but also on changing the perceptions among people with disabilities themselves regarding the possibility of employment. Assistive technology is a vital key to the employability of many people with disabilities. But the fact that so few respondents viewed lack of AT as a barrier to employment may suggest that there is little awareness among this population of the potential benefits of technology in facilitating the performance of job tasks. Health care providers might also be better educated in the availability and benefits of workplace AT, so that they could encourage people with newly acquired disabilities to begin using AT to help them continue to perform their job functions, and thus remain employed. For people with longer-term disabilities, there is also a clear need for greater awareness of the employment possibilities offered by

		attainment, the instrument was shortened and its language and structure simplified to facilitate complete response by a broader audience. Most of the questions that had been open-ended in the pilot, requiring a handwritten or typed-in response, were replaced by a menu of pre-defined responses plus an "other" category.		assistive technology and assistive services, among both consumers and the agencies and organizations that provide services to them. Several findings highlight the importance of greater opportunities for education and job training among the ILC consumers. Educated respondents were much more likely to be employed than those without much education, and much more likely to use workplace assistive technology or assistive services if they had jobs. Lack of education was cited as an important barrier to employment, and the need for specific job skills was often mentioned as a factor that would help to gain or retain employment. Greater attention needs to be paid to offering such opportunities to people with all types of disabilities, not just those with the most severe disabilities who are typically served by state rehabilitation agencies.	
Barnard S. & Tomkins M. 2011. ImPaCT in Europe. **I**mproving **p**erson	A Questionnaire and Report, mapping PCT in Europe, to understand current	Survey in 2010 (158 organizationsresponded; of 230)	48 of 158 responded organizations were from Finland, 30 from UK.	1. There is a **need to be very explicit from the outset of the**	https://www.ldw.org.uk/media/123560/impact_mapping_report_final.pdf

centred **t**echnology in Europe. Project report.	usage and practices related to the use of technology to support people with disabilities		CT is the most often used technology option to support service users ahead of EAT (electronic Assistive Technology). More than one in five of the respondents do **not have anyone they would consider a technology expert to help them** with their work Over **one in four service users has no access at all to EAT** whilst more than **90%** of service users have access to **some form of ICT** Over a **40% of respondents do not provide any training to their staff** to assist service users with technology Approximately **1/3th of respondents do not involve service users in the individual ICT or EAT provision** There appears to be very **little co-operation with other stakeholders when implementing ICT or EAT technologie**s within an organization The most often cited	**purposes** of each question in the survey with a view to the type of analysis that will flow from such questions 2. There is a **need to clearly define terms to respondents** i.e. ICT and EAT and expand on what these mean otherwise the results may be misleading 3. **EAT is still underdeveloped across the EU and there is a low level of appreciation for its value for the end user**. 4. **ICT is much more developed than EAT across organisations working with those with a disability**. However, its use is predominately to aid communication and other more innovative uses are hard to find. 5. There is a **need to undertake further in-depth analysis** of the extent of the spread of personalized technology in Europe to verify the results of this survey. **However, the survey itself has made a useful contribution to the debate and helped to 'spread the word'** on the potential value of personalized technology to the end user. 6. Although there are many examples of projects across the	

			reason for providing ICT or EAT is to assist service users **with their communication needs**. This was also the most common benefit in the view of staff from these organisations	EU that work with technology and disability, there **remain few that put the end user at the centre of the development of technology** and that have conducted a thorough **evaluation of both quantitative and qualitative outcomes for the end user**	
			Both **Finland and UK** respondents stand out as having a **much higher priority for using technology to support employment opportunities** as compared to respondents from other EU countries		
			There are **concerns that the amount or replies do not represent sufficient numbers to obtain statistically significant results**. This could be due to a failure to fully appreciate the growing significance and lack of information at service provider level in the area of EAT. Alternatively, it could well be an illustration of the current low level of ICT development in general for those with a disability.		
			There is also the **issue of differing interpretations** that **these organisations**		

			might have on the meaning and use of EAT and very different experiences. However the **sample is not bigger enough** to really draw any meaningful conclusions		
Strobela ,W & Todd McDonoughb, J. (2003). Workplace personal assistance service and assistive technology. *Journal of Vocational Rehabilitation, 18*, 107–112	This paper examines how assistive technology can be utilized in conjunction with personal assistance services in the workplace.	Through case examples, the authors show how assistive technology can assist an individual with a disability to become more independent and productive in the workplace. In addition, the authors review factors influencing the selection and utilization of assistive technology at the workplace and demonstrate how the use of assistive technology can lessen an individual's dependence on a personal assistant while at work	The potential user must have an understanding of AT to apply it effectively in the workplace. As consumers of assistive technology, it is important to have an idea of the types of equipment that are available in today's marketplace. Often times, creativity plays a large role in the equipment selected for any given situation. Sometimes the simplest interventions can make a world of difference. The type of assistive technology used in a situation will vary greatly depending on the nature of a person's disability. An evaluator or prospective AT should take into account the individual's skills that can be maximized through the use of technology. Environment also plays a	A potential user of assistive technology should have a working knowledge of the types of AT that may be beneficial. This knowledge can be gained through the Internet, talking with other AT users, shopping at an office supply or computer store, or talking with professionals. It is imperative that a prospective AT user has a working knowledge of the AT system and an in-depth knowledge of the job duties that will be performed. This information will empower a prospective AT user to have an intelligent conversation about what technology might be beneficial and what device would be the most effective for the job tasks. While technology offers many effective options to assist a person with job tasks, it cannot complete a job for a person with a disability. The employee must be qualified for a position and be	https://www.google.com.cy/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB4QFjAA&url=http%3A%2F%2Fwww.worksupport.com%2Fdocuments%2FworkplacePAS.pdf&ei=WdpoVe7XOMG4UZjXgYgI&usg=AFQjCNEJl7YXyHtyxY1DqA7T-F6Fek72PQ&bvm=bv.94455598,d.d24

			key role in the identification of AT. Assistive technology is situation-specific. Technology should be prescribed at the job site where the AT will be used, not in a medical or rehabilitation setting away from the job site. A visit to the work environment will not only provide the information necessary to ensure that the technology will best meet a person's needs, it will also provide other valuable information. AT should be introduced in a way that will not adversely affect the performance of others in the work place. In many offices, equipment is shared. Therefore, the technology must either be optional or functional for everyone performing a particular job function Other people in the office may frequently utilize the technology introduced for an employee with a disability. On a job site, it is also important to consider the	able to perform the essential functions of the job duties with or without accommodation, including the possible use of a personal assistant at the workplace as a reasonable accommodation. Essential job functions are those primary duties that a person must be capable of capable of performing, with reasonable accommodations if required.	

			supervisor's approval for a piece of assistive technology. The durability of a piece of technology is also an important consideration when implementing AT on the job site. If a piece of equipment is to be used on a regular basis, it must be durable. The durability of a device can be determined in a number of ways. The most effective source of this information is often talking to other people who are using the same or similar devices. Training on AT devices is essential to their successful use. The employee utilizing the AT requires training on the device in order to complete job tasks as independently as possible. Co-workers and personal assistants should also be trained in the event that regular maintenance or troubleshooting is required.		
Wehmeyer, M.L., Palmer, S.B., Smith, S.J, Parent, W., Davies, D.K. & Stock, S. (2006) Technology use by people with intellectual and	Technology has the potential to improve employment and rehabilitation related outcomes for persons with disabilities. The	A comprehensive search of the literature pertaining to technology use by people with intellectual disabilities was conducted, and a single-	The use of technology to promote outcomes in this area was shown to be generally effective, in particular when universal design features were	Technology has the potential to enable people with intellectual and developmental disabilities to achieve more positive employment and rehabilitation outcomes. It is important to focus on universal	http://kuscholarworks.ku.edu/bitstream/handle/1808/17895/WehemeyerM_JVR_24(2

developmental disabilities to support employment activities: A single-subject design meta- analysis. Journal of *Vocational Rehabilitation,* 24, 81.	purpose of this study was to examine the impact of technology use on employment-related outcomes for people with intellectual and developmental disabilities.	subject design meta analysis was conducted for a subset of those studies, which focused on employment and rehabilitation related outcomes. An extensive search of the PsychINFO and ERIC databases for articles published from 1977 to 2003 was conducted using two key words (mental retardation, intellectual disabilities) with a combination of other key words	addressed.	design features important to persons with cognitive disabilities, and there is a need for more research in this area. The results of this single-subject design meta-analysis confirm the indications in the literature that technology use can contribute to more positive vocational and employment related outcomes for youth and adults with intellectual and developmental disabilities. There were too few studies examining any one type of technology to warrant analysis by that factor, but there is a need to examine the impact of particular types of technology on vocational-related outcomes. Similarly, the technology was applied to address a wide range of vocational and employment related outcomes, from work-related social skills [16], task sequencing and transition skills [22], vocational task performance and completion [6,9–12,14], food preparation skills [23], vocational assembly skills [1], requesting assistance on a vocational task [20], general cleaning skills [3], and computer-use itself [13]. The variety of technologies and activities to which these technologies were applied speak to the significant potential that technology can play in shaping positive employment and vocational outcomes. There are a number of limitations that must be taken	)81.pdf?sequence =1&isAllowed=y

				into account when interpreting these results. First, there were relatively few studies overall and the outcomes of the meta-analysis would have been stronger with a larger sample base. Nonetheless, the level of analysis in this meta-analysis was the unique intervention event, and not the study, and there were 42 participants in the study resulting in 94 cases for analysis, which we believe is of sufficient size.	
Banks P., Jahoda A. , Dagnan D., Kemp J. & Williams V. (2010): Supported Employment for People with Intellectual Disability: The Effects of Job Breakdown on Psychological Well-Being. *Journal of Applied Research in Intellectual Disabilities, 23*, 344–354	This paper focuses on the transition to supported employment for people with intellectual disabilities paying particular attention to the impact of job breakdown on psychological well-being; an issue often omitted from studies.	Forty-nine people with intellectual disabilities were interviewed within 3 months of entering supported employment and 9–12 months later. Data collection involved in-depth interviews with people with intellectual disabilities, their carers and employers and completion of a self-report measure of depression and anxiety (an adapted form of the Hospital Anxiety and Depression Scale), and a self-report measure of quality of life (the ComQol).	By time of the follow-up interviews, 13 of the 49 jobs had broken down. Analysis of scores measuring quality of life, anxiety and depression showed no effect for loss of employment. However, interviews with participants indicated that job loss had a considerable impact on those affected.	There were a wide range of reasons for job breakdown, many of which were particular to the circumstances of people with intellectual disabilities. Although job breakdown does not have an impact of anxiety or depression many participants found job loss traumatic.	http://onlinelibrary.wiley.com/doi/10.1111/j.1468-3148.2009.00541.x/abstract
Beyer, S. (2012). The progress towards integrated employment in the UK. *Journal of Vocational Rehabilitation, 37*, 185–194	The UK has a significant body of equality legislation to underpin social inclusion of disabled people through employment. It has a mixed model of employment that includes factories, individualized employment support and supported	This article reviews the development of relevant legislation, policy and programmes targeting inclusive employment of people with disabilities in general, and learning disabilities in particular, along with UK based data on the outcomes being achieved.	45.6% of disabled people are employed compared to 76.2% for non-disabled people. Relative measures of employment advantage suggest that the situation for disabled people is getting worse. There has been a shift in the last 10 years from allocation to a programme to a more individualised service response and from factory to	If inclusion is to be achieved there is a need for adequate investment in the intensity and type of employment support appropriate to the needs of the person. Consideration should be given to policies that improve the availability of jobs, flexibility and inclusiveness among employers as well as measure that focus on the disabled person.	http://content.iospress.com/articles/journal-of-vocational-rehabilitation/jvr613

employment. It does not have dedicated funding for supported employment however and these services rely on a jigsaw of funding. There has been a shift to bring people with health problems on welfare benefit into employment on health and cost grounds. There are around 6.9 million disabled people of working age in the UK, of which around 1.5 million have a learning disability. Our best year-on-year estimate of the number of disabled people in employment is the Labour Force Survey [39]. This suggests that 45.6% of disabled people were in paid employment in 2011, compared to the general employment rate of 76.2%, in the same year. The trend was for a steady increase from 44.5% in 2002 to a high of 48.3 in 2008, and a fall from 2009 to the current position as the recession took hold. However, when changes in the employment rates of non-disabled people are taken into account the difference has fallen consistently from a difference of 36.2% in 2002 to 28.7% in 2011. Researchers confirm that disabled people remain disadvantaged in the		community employment. People with learning disabilities, autism and mental health problems remain relative poorly served.		

	labour market, not only having a greater likelihood of being unemployed, but also of having less stable jobs and lower pay than non-disabled people				
Bruyère, SM., Erickson WE, & VanLooy, S. (2005). Information Technology and the Workplace: Implications for Persons with Disabilities. *Disability Studies Quarterly, 25*(2), online at www.dsq-sds.org	Information Technology and the Workplace: Implications for Persons with Disabilities	A survey of 433 HR representatives was conducted regarding their organizations' use of information and Web technology in HR processes; knowledge of computer/Web barriers to employees with disabilities; and familiarity with assistive technology and resources.	The respondents were asked about how familiar they or their staff were with six of the most common assistive technologies used to adapt computers or information technology applications. Nearly half (46 %) were familiar with screen magnifiers, although nearly a third were unfamiliar with this technology. Approximately a third reported familiarity with speech recognition software. Video captioning was familiar to one out of four respondents, but was unfamiliar to over half. Assistive technologies designed for blind individuals were unfamiliar to the majority of respondents. Only 13 % of all respondents noted familiarity with guidelines for accessible Web design, with those from larger organizations (500+) more likely to report familiarity (17 % compared to 9%).	This research also illustrates how experience with accommodations or workplace adaptations can lessen the likelihood that disability will be perceived as a barrier. Therefore increasing the exposure of human resource professionals and supervisors to IT and other workplace accommodations for persons with disabilities may be very helpful. This can be accomplished through training, or by sharing across organizations successful stories of accommodation experiences. This consciousness raising can also be accomplished more directly by providing exposure to persons with disabilities through summer internships or mentoring programs for students with disabilities. In closing, as indicated by the results of this research, some of the specific recommendations for lessening future workplace IT barriers are as follows: increase the organization's specific expertise or technical assistance	www.dsq-sds.org

| | | | | on technology accessibility issues; train technical staff about accessibility issues, promote uniform guidelines to make Web-based employer processes accessible; and provide computer training for potential employees with disabilities. Such proactive efforts toward removing technology barriers will go far to reduce the likelihood that claims of IT accessibility discrimination will occur. | |

Theoretical Papers

Citation	Topic	Commentary/narration/ review	Conclusion	Link
Keijer, U. & Breding, J. (2012). Work life, new technology and employment of disabled people: A twenty year programme. *Technology and Disability, 24,* 211–218	A development programme was carried out by the Swedish government and the Swedish Labour Market Board (AF) over a period of more than twenty years. The paper describes a case history of a single national programme. Some significant conclusions from it are given. The rationale for the effort was the advent of micro-computers in the early 1980s and the ICT development in general. It was realised that people with disabilities would struggle in the job market if active measures were not taken.	ICT has facilitated life for many individuals with reduced functionalities. The potential to participate in social life, also in work life, has increased. Especially, themobile telephone and the Internet have changed life for many. The continuing miniaturisation of electronics, implants, sensors and actuators of different kinds offer new and amazing opportunities. To turn these possibilities into earning one's own living is a tremendous task for a person with reduced faculties and he or she needs as much support as possible. The societal task still lies ahead.	the support for technical development within the field of assistive technology for the labour market was not a headline commitment within the AF. It survived over the years mainly by a few lines in the yearly instruction by the Ministry of Labour to the AF. The advantage of having AF as a strong procurer had also some negative implications. The commitment by the top management of AF varied over time. It pertained to the technical development, but also to maintain the support for the disabled jobseekers. It should be borne in mind that the main task of AF was on behalf of the government to keep the general unemployment as low as possible and to deliver the required workforce to big and small employers. It **pertained to the technical development**, but **also to maintain the support for the disabled jobseekers**. It should be borne in mind that the main task of AFwas on behalf of the government to keep the general unemployment as low as possible and to	https://www.google.com.cy/url?sa=t&rct=j&q=&esrc=s&source=web&cd=1&cad=rja&uact=8&ved=0CB4QFjAA&url=http%3A%2F%2Fwww.diva-portal.org%2Fsmash%2Frecord.jsf%3Fpid%3Ddiva2%3A570610&ei=wNtoVc-ZN8yrUfnNgagE&usg=AFQjCNGOVPcdI3LrFlmxZzMsVzh4Qy4OZw&bvm=bv.94455598,d.d24

| | | | deliver the required workforce to big and small employers. The aforementioned **employability institutes were dismantled in the late 1990s and the remaining staff were distributed to jobcentres for ordinary unemployed jobseekers**. The nature of **technical development was and remained as an unfamiliar phenomenon** to the higher levels of the AF management. During some periods the on-going project work took place in a rather isolated environment within the organisation. These observations were pointed out in a study 1994.

Another intrinsic problem was the professionalism of the staff at AF. Occupational and physical therapists, psychologist, vision or hearing educationalists **and other behaviour specialists were very good in their respective fields of expertise**. **Too many of them, however, had no interest to go beyond their safe platform of knowledge and to navigate in unchartered waters, i.e. to explore what the new technology would offer for** | |

			their basic task, viz. to bring a person with disabilities from unemployment to employment. **Only a limited number of the staff saw and understood the emerging opportunities**. To **improve the future ability of staff** to work in this field it must **be a part of professional skills** to draw up a functional specification for some sort of device or system for the solution of a problem at hand; and, if it is not directly available on the market, how to procure it. This is a challenge, indeed. Most likely, this **must be addressed in the ordinary basic professional education**. **The training should be as concrete as possible**.	
Gamble, M.J., Dowler, D.L. & Orslene, L.E. (2006). Assistive technology: Choosing the right tool for the right job. *Journal of Vocational Rehabilitation, 24,* 73–80	Rehabilitation professionals are often required to make decisions about the benefits of using assistive technology in the workplace. Knowledge of current resources and a systematic process for identifying and selecting AT increase the likelihood of successful consumer outcomes. Increased access to assistive technology has opened	The use of technology has been shown to enhance the ability of individuals with disabilities and to assist them in performing jobs that would be difficult without the aid of assistive devices *1.1. Barriers to use of assistive technology* While assistive technology can be an important part of the rehabilitation plan for workers with disabilities, AT may not be effective if it is applied inappropriately, when workers choose not to use it, and/or the selection of a specific product is not made in a systematic way. Riemer-Reiss and Wacker found that the user's	Vocational rehabilitation professionals are the primary source of vocational services for people with disabilities. As such, one responsibility of rehabilitation professionals is to facilitate the access and use of AT for the consumers they serve. Having the necessary knowledge of AT and skills in working through a systematic selection process are critical to successful consumer employment outcomes.	https://web.a.ebscohost.com/ehost/pdfviewer/pdfviewer?vid=27&sid=5e9c6f3a-2441-4dd7-b82c-02b32a52712c%40sessionmgr4004&hid=4214 (EBSCO)

employment opportunities for many individuals with disabilities, but barriers to successful accommodation include inappropriate selection of AT and discontinuance of the implemented technology. This article presents a review of relevant literature on the use of workplace AT and describes a model for selecting appropriate assistive technology.	perception of the relative advantage of technology, compatibility of the AT, along with consumer involvement in the selection of the technology were predictors of adoption or discontinuance of an accommodation. Riemer-Reiss andWacker recommend higher levels of consumer involvement as a strategy for decreasing the rate of discontinuance of assistive technology. Mondak found that the lack of knowledge about accommodation options and funding for AT are barriers to the use of assistive technology as accommodations for individuals with visual impairments. According to Scherer about 33 percent of all devices provided to rehabilitation consumers are abandoned. Also, consumers' perception of barriers that may result from a lack of timeliness in receiving equipment, inadequate evaluation procedures, and the absence of collaborative evaluations were reported by Crudden and Fireison Other researchers have examined **psychosocial factors** as barriers to use of assistive technology. Day et al. tested the hypothesis that the impact of technology would wane over time. They found that the immediate positive impact of the use of technology by individuals with visual impairments did not diminish over time or contribute to discontinuance of the use of AT for 175 participants with visual impairments. *1.2. Identification and selection of AT* The explosion in technological development has both positive and negative consequences. It has increased the accommodation options for	A variety of barriers to successful implementation of AT have been described in the literature. Also, the value of including the consumer in all phases of the AT selection process has been demonstrated. Use of a systematic decision-making process, although time intensive, may reduce traditional barriers to AT, increase the perceived effectiveness of accommodations, and reduce costs associated with discontinuance.	

		workers with disabilities, on the positive side, and created a dilemma in identification of a specific technology for use in a particular employment setting, on the negative side. This expanded choice ofAT options nowenables differences among individual users to be accommodated, but the process of matching person and technology has become more complex, since individual expectations and reactions vary so widely. **The benefit of AT for workers with disabilities** is undeniable. However, the barriers to appropriate use of AT have resulted in the under-use of potentially valuable technologies. Discontinuance of technologies present an additional barrier. Challenges for rehabilitation professionals include staying abreast of information on current and developing technologies and assisting consumers in the process of systematically selecting AT that will meet the needs of the individual consumer within a specific work arena. The following **six step process** assists the rehabilitation counselor with choosing the right tool, or AT, for the right job. The steps include (1) Defining the situation; (2) Identifying available resources; (3) Exploring appropriate AT; (4) AT in vocational assessment; (5) AT and job readiness; and (6) AT in employment.		

Bricout, J.C. (2004). Using telework to enhance return to work outcomes for individuals with spinal cord injuries. *NeuroRehabilitation, 19,* 147–159	Return-to-work is an area of critical concern for individuals with a spinal cord injury (SCI), because of the psychological, psychosocial and economic benefits of employment	-*Return-to-work challenges*: Barriers to employment for people with SCI include physical limitations, worksite and community accessibility, medical complications, inadequate disability benefits, decreased self-efficacy, transportation needs, employer biases and stress; -Women and racial minorities appear to have higher rates of unemployment than males and whites with SCI. Older workers and those with less education are less likely to be re-employed post-injury -T*elework*: Telework, or paid work conducted from a remote location at least one day a week using Information and Communication Technologies (ICT), such as computers and telephones, is a promising work medium for improving the likelihood and quality of return-to-work for individuals with SCI. Telework may be conducted on a part-time, or full-time basis. -An important caveat is that workers in jobs suitable for full-time telework will need adequate communication channels to the office to avoid professional and social isolation. -*Prevalence of telework*: Because of divergent definitions of what constitutes telework, variations in sampling techniques and the variegated employment status of teleworkers (including employees, contingent workers and self-employed) it is difficult to reliably estimate the number of teleworkers -*Telework as an accommodation*: Home-based telework has several characteristics that suggest it might ameliorate the return-to-work opportunities for individuals with SCI. Based on the previous review of SCI employment and SCI return-towork literature several dimensions emerge as critical to any work medium promoting the employment and reemployment of persons with SCI. These critical dimensions are: removal of mobility barriers, reduction of employer bias, knowledge or information-based work, flexible supports,		http://uta.influuent.utsystem. edu/en/publications/using-telework-to-enhance-return-to-work-outcomes-for-individuals-with-spinal-cord-injuries(a29ab764-845d-4136-90dd-6a1302da5e1e).html

and opportunities for career learning and growth. Telework arrangements can accommodate these dimensions, either directly or in concert with other employment strategies.

Telework potential for individuals with SCI:
-***Removing mobility limitations*** One of the chief attributes of telework is its freedom from the bounds of geography, and in particular, its capacity to be home-based
-***Reducing employer bias.*** An argument can be made that removing the worker with SCI from the workplace obviates appearancebased prejudices. However, given the fact that some face-to-face contact with supervisors and/or coworkers
is valuable to teleworkers, teleworkers with SCI are unlikely to benefit from the lack of stigma associated with anonymity. Moreover, there is some question whether removing individuals with a disability from the workplace actually decreases employer
bias.
-***Promoting knowledge-based work***
One of the most commonlycited reasons for employers to adopt telework programs is to retain highly skilled workers. ... However, individuals who do not have comparable professional training in a 'knowledge worker' field may find themselves engaged in socalled 'pink collar' data entry jobs and marginalized in terms of promotion and career advancement possibilities [67]. Moreover, the odds of an individual with SCI receiving additional training do not seem good.
-***Opportunities for learning***
Because telework takes place away from the office it may engender professional as well as social isolation [20]. Of particular importance from the standpoint of career development is the professional isolation,
which can impede not only promotions, but also the learning process that undergirds promotability; and indeed, job sustainability

Beech, R. and Roberts, D. (2008) 'SCIE Research briefing 28: Assistive technology and older people' Social Care Institute for Excellence, Accessed 11 February 2013	Assistive technology and older people Focus on various forms of assistive technology (AT) supplied to people over the age of 65. AT can be defined as '...an umbrella term for any device or system that allows an individual to perform a task they would otherwise be unable to do or increases the ease and safety with which the task can be performed.	The majority of research to date is based on case studies and other research based on observable evidence. Benefits claimed for people who use services • increased choice, safety, independence and sense of control • improved quality of life • maintenance of ability to remain at home • reduced burden placed on carers • improved support for people with long-term health conditions • reduced accidents and falls in the home. SCIE has been asked by the sector to convene an advisory group to consider the production of an ethical code for use by all those involved in the provision, commissioning and manufacture of assistive technology and telecare.	Perceptions vary as to whether or not assistive technology has sufficient benefits. Existing research supports the greater use of assistive technology but further evaluation and 'local learning' is needed. • The views and needs of people using assistive technology need to be taken into account.	http://www.scie.org.uk/publications/briefings/files/briefing28.pdf