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Increasing the IMPACT of assistive technology

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Abstract

This article reports on the IMPACT project (funded by European Union, DG XIII) which aims to increase the awareness of and knowledge about assistive technology amongst professionals in European health and social services. While these professionals play a crucial role in bringing together needs and available assistive technology, reality often finds them with low awareness and insufficient knowledge in this area. The IMPACT aims will be pursued primarily through the development of educational materials for pre-service and post-qualification educational usage in different European languages (using both traditional methods as well as multimedia).

Introduction

Within the context of the ageing society and the move towards home-based care, interest in assistive technology production and implementation is growing. Assistive technology enables disabled and elderly people to participate more fully in daily life and supports their independent living. From a technological perspective, these products are often state-of-the-art and represent the results of innovative R&D efforts. From a human perspective, they make the difference between being able to fully participate in society or not.

Unfortunately, from a social perspective, these innovations too often are restricted too often to a small number of persons. Dissemination is hampered by shortage of resources and inadequate information on what is currently available. While the IMPACT project cannot address the shortage of resources, it can increase the awareness of and knowledge about assistive technology amongst professionals in health and social services. These aims will be pursued primarily through the development of educational materials for pre-service and post-qualification education (using both traditional methods as well as multimedia). The final products will be available in the summer of 1999 and be distributed at production cost in at least three European languages: English, Dutch and Danish.

In this text, we outline the basic starting points of IMPACT, as well as the core ingredients of our approach and the limitations we face.

Matching needs, demands and supply

Given the existence of both technological and societal stimuli for more and better assistive technology, it is not surprising that a lot is on offer. Overviews such as Handynet or Abletech or

even a catalogue of an average assistive technology provider illustrate the availability of many different products for many different activities or impairments. While this does not imply that the current available technology can no longer be improved or be expanded, it does indicate that many users can benefit from the available technology.
However, many more potentially could benefit but do not due to non-existing or bad use of assistive technology. Within the context of the current available assistive technology, there is potential for improved usage, both in quality and quantity of usage. Quality of usage can be improved by better implementation of assistive technology. Too often, a user acquires assistive technology that is hardly used due to lack of information, support or maintenance. Quantity of usage can be improved by increased awareness about assistive technology. Many users who can benefit from assistive technology do not actually use if, for several reasons. While the empirical data from the research into the non-take up of welfare benefits (van Oorschot 1995) may not be relevant to explain the non-take up of assistive technology, the theoretical models help us to identify the main reasons for non-take up. Significant elements are the stigmatizing effect of using assistive technology (e.g. not using visible hearing aids fearing to be labeled 'deaf'), the perceived complexity of the claiming process (documented by the recent HEART study into the European service delivery system in rehabilitation technology) and the lack of information about the available product or service. In addition to this, we may include the lack of resources explaining non-optimal usage of assistive technology, which is for obvious reasons less of an issue in the context of welfare benefits.
For many welfare benefits, a substantial amount of persons entitled to the benefit simply do not know about their entitlement and consequently never make a claim. Similarly, in assistive technology, many persons who would benefit from using a certain product or service do not use it because they simply to not know about its existence. In the assistive technology literature, this is time and again mentioned. Unfortunately, no substantial empirical research has been carried out to validate this assumption or analyse the details and dynamics of this non-take up of assistive technology. Although the work within the IMPACT project cannot substantiate our scholarly interest in this area, we do share the assumptions and wish to address them by increasing awareness about assistive technology.

ATI's, a new species

The already mentioned HEART study (de Witte et al. 1994) establishes a model to describe the provision of assistive technology and allow a comparative study of these processes. The model identifies the following stages: initiative, assessment, typology of the solution, selection, authorisation for financing, delivery, management and follow-up. Clearly, in this process the specialist or assistive technology provider (ATP) plays a crucial role.
Our concern with this model is that it takes the initiative as a starting point, while there is ample indication that not all potential beneficiaries of assistive technology actually take this initiative. Hence, the model needs to be expanded by including a stage before the initiative is taken and users are in a situation where there is a need (difficulty to hear the television) but not yet the appropriate initiative (putting sound loud, disturbing spouses and neighbours rather than use head phones). Herein, the users of assistive technology play a crucial role. These may be the end-users themselves, being elderly, disabled or other persons. Equally, this includes other persons such as spouses, neighbours, family or voluntary help. All have in common that they are confronted with an impairment in the specific situation of a particular person, an impairment that can be avoided becoming a disability by applying assistive technology.
Whilst recognizing the ATP's and users as stakeholders in the process that matches needs and supply of assistive technology, the model needs further elaboration to include professional carers.

In reality, users are regularly secondary consumers and professionals the true decision makers. Although a lot has changed for the better since the phenomena of secondary consumerism was first circumscribed by Richard Titmuss (Titmuss 1968), professionals still hold an important position of gatekeeper in health and social care, whether by design (e.g. as care manager) or de facto.
We have labeled these professional carers ATI's or assistive technology intermediaries. They are the professional carers that are not specialists in assistive technology but through their daily work are confronted with persons struggling with impairments. Significant professions that have an ATI role are GP's, home carers and social workers, but also occupational therapists, hospital nurses and the like.
These ATI's in practice lack basic knowledge about assistive technology but act as important gateways. By providing simple information, they can initiate a user's interest in certain types of assistive technology, overcoming unawareness of this product's existence (e.g. helping hand, ADL tools or alarm systems) or reduce stigma associated with its use (e.g. hearing or walking aids). To the extent they do not perform these tasks due to lack of awareness, familiarity or information about assistive technology, they do not facilitate but hamper an optimal match of needs and technology.

Increasing awareness and facilitating good practice

Realising that many and increasing calls and expectations are being made on professionals, the modest aim of IMPACT is to produce learning material to stimulate awareness about and familiarity with assistive technology amongst European caring professionals. This learning material will consist of multi-product courseware, including paper-based student's and instructor's manuals, case studies and educational multimedia on CD-ROM. Additional educational material such as a video or the simulation spectacles of the Royal National Institute for the Blind (RNIB) might be included.
The material will be developed mainly for usage in pre-service training in higher education circumstances or post-qualification training. Whilst educational multimedia is also promising easy delivery of self-study material, our initial interviews with caring professionals indicated self-study to be an endangered species. Consequently, it will not be our main priority.

Limitations and challenges of educational products

The production of our educational material faces a number of significant challenges, being the depth and scope of the material, the sustainability of the contents and the way linguistic and professional diversity is dealt with.

The depth and scope of the courseware is a critical factor not only in the production costs but also in the (time) investment the student will be expected to make in grasping a proper understanding of the covered material. Both pre-service and post-qualification training determine the limits in this. In basic *pre-service training* of caring professionals, assistive technology unfortunately does not usually form part of the curriculum. At best, it is integrated as a subject in other courses. The time available to convey information on assistive technology is hence limited. While *post-qualification training* is not guided by official curricula, our initial exploratory interviews made it clear that assistive technology does not feature on this agenda, apart from the rare exceptions or submerged in other subject matters. Hence, the depth and scope of our material cannot be too large so as to make our products too extensive for real usage in the targeted circumstances.

Although the right balance between being too shallow or too deep still has to be set at the time of writing, it is clear our products will not take an encyclopedic approach. In addition to the mentioned reasons, such an approach would also have the disadvantage of replicating the existing substantial efforts to chart the supply of assistive technology through e.g. Handynet or national products such as Vlibank (Flanders), Revagids or TechHulp (both the Netherlands). Ultimately, our approach will have to focus on awareness raising amongst caring professionals and as such we opt for products that leave lasting impressions rather than be exhaustive.

This relates to the second challenge, that of the sustainability of the contents. The more detailed contents and depth our material will have, the more frequent the information will need to be updated. Technically, this can relatively easily be solved by making use of hybrid multimedia that combines CD-ROM for core modules and internet for updates. Unfortunately, updating information requires not only technical solutions but equally information flows and resources. While IMPACT is project based and hence limited in time, our exploitation plan will explore ways to guarantee minimal continuity of the products beyond the strict project timeframe.

Our courseware will be produced on a European level, making linguistic and professional diversity an issue. While initial development is in three languages, the multimedia will be open-ended to allow for translation. The professional diversity might be less easy to address. Whilst assistive technology products are, given the common European and even global market, very similar across countries, the specifics of service delivery processes and reimbursement systems are very disparate across or even within countries. It is at the time of writing unclear how we will address this issue in our products.

Conclusion

IMPACT will produce courseware to increase European caring professionals' awareness of assistive technology, aiming to consequently reduce non-take up or improper usage. At the start of our development work, we face different challenges, for which several options will be explored. Obviously, practical solutions fitting the time and budgetary constraints of the project will have to be selected. While this calls for a realistic approach during development, it equally stimulates our quest for creative solutions and strengthens our focus on dissemination and implementation. Indeed, IMPACT can only fulfil its promise of increasing the impact of assistive technology if it has an impact itself on the training and education of caring professionals across Europe.

More information is available from our web site at http://www.fontys.nl/causa/impact/ or from one of the partners. These are Causa (the Netherlands), Stakes (Finland), Work Research Centre (Ireland), Centre for Human Service Technology (UK) and School of social work of Aarhus (Denmark).

Literature

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