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Reaching out - A Multidisciplinary Master's Program in Health Informatics

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Abstract. By providing an arena for learning and reflection where both ICT professionals and health personnel can learn and reflect together, we propose a chance for better projects and better ICT in healthcare.

Keywords. Further Education, Health Informatics, Multidisciplinary

1. Introduction

The use of information and communication technology (ICT) is often forwarded as a key to improving the provision of healthcare in a sustainable fashion, as elsewhere in current society. But though our modern hospitals are infused with technologies of every kind, our visions of seamless integration and pervasively flawless healthcare do not match to the patchy images of ICT-assisted healthcare provision attested by patients, healthcare personnel or authorities when they describe their own experiences of healthcare services, with or without ICTs. A few examples where improvement of current information systems in healthcare is needed are:

- Presentation of information and knowledge to the professional in diagnosing and delivery of treatment in a relevant way for the work activity as it unfolds.
- Aggregation and presentation of information in order to evaluate local medical regimes or performances to gain new knowledge or improve current practices.
- Harnessing the potential of the patient in managing his or her own health.
- Secondary use of healthcare data requires supplementation and presentation of relevant datasets useful for practitioners' research on treatments.

The realization of ICTs as useful in organizational settings, including healthcare, has proven to be a complex and ongoing challenge that requires insights, competence and capacities on a broad scale in a continuous fashion [2]. It is a socio-technical issue that needs the involvement of a variety of users as well as technology [1]. IMIA has developed a recommendation on education in biomedical and health informatics [3]. We here present the multidisciplinary masters program in health informatics at NTNU.

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2. The idea – diverse professions seeking common language and understandings

The program is open for professionals with minimum a bachelor's degree in ICT or healthcare and more than two years of practice in the sector. Now into its third year, the program has almost 40 students, ages thirty to fifty, from all over Norway. They form a balanced mix across gender and private or public occupation. While a third has a technical background, the others include nurses, doctors, radiographers and bioengineers. In common they venture a heartfelt desire to contribute to better healthcare through their own future work by learning and understanding more of what is needed in this domain. While the curriculum is central (see Table 1), taught by an experienced staff active in health informatics research so is the students' opportunity to learn from the experiences of their classmates. Discussion runs high both in class and group projects.

Table 1. Courses given in the 4-year program. A student with a health education background will do the topics in the first two columns. Those with an ICT background will do topics in the middle and right columns.

Topics for health personnel	Topics for both groups	Topics for ICT personnel
	Master thesis	
	Pilot study	
	Chosen theory (two topics)	
	Research methods	
	Clinical information systems	
	Epidemiology and community medicine	
System developement	Human-computer interaction	Decision-support
Programming	IT, Organization and Collaboration in Healthcare	Medicine and healthcare Services
Databases	Introduction to Health informatics	Introduction to Biology and disease

3. Results so far

Second year students, interviewed confidentially on their experiences and utility so far say for instance: *"I think that this has been useful for me already. .. I have a better understanding of the need for testing in development".* Another says: *"I have become aware of the various challenges in implementation processes. .. So you are better equipped for your work".* Several claim that they are now better able to argue their point such as: *".. because you understand better how things relate to each other, .. if they don't understand your order, ..you can support it and push it through differently..".*

References

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