Proofpoint

Swiss Universities of Applied Sciences and Arts

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Project: Putting a research-based tool for child protection into practice

Bern University of Applied Sciences, BFH
Lucerne University of Applied Sciences and Arts, HSLU

Over and over, child abuse and neglect have been shown to be major risk factors in child development. Most countries today have established authorities who can intervene in families where child abuse and neglect are suspected. Yet these phenomena are difficult to pinpoint: What exactly constitutes abuse or neglect? What consequences are to be expected? What measures will prove effective to ameliorate the situation? In a joint effort, teams from the Bern University of Applied Sciences and the Lucerne University of Applied Sciences and Arts have developed a web-based tool for making such assessments.

The tool incorporates the best and latest knowledge on family-related risk and protective factors in child development. To make sure the instrument addresses the needs of the field, it was developed in close collaboration with practitioners. The tool is tailored for use in the Swiss legal system. The outcomes of its implementation will be rigorously tested in a three-year longitudinal study.

more (in German)

Project: Teaching critical thinking

FHNW University of Applied Sciences and Arts Northwestern Switzerland

The critical thinking module for ETH students – developed in partnership with Neuland & Partner (www.neulandpartner.de), Prof. Dr. Albert Vollmer, and Ariane Vetter from the FHNW School of Applied Psychology – is part of the ETH Critical Thinking Initiative. The overall goal is to promote critical and independent thinking as well as social and interdisciplinary skills.

The module, compatible with all disciplines, is delivered as a 90-minute lecture. The group assignment begins with sub-groups discussing a range of ways in which to solve a particular problem from various perspectives, and ends with an integrated solution. The process is supervised by a facilitator. “Ideally, this leads to a high-quality solution. Or at least it allows different viewpoints to be recognised and progress to be made towards solving the issue,” says Albert Vollmer.

The toolbox contains everything a lecturer needs to deliver the critical thinking module: simple, clear instructions on the method and its realisation, questionnaires for the group assignment, a facilitation guide, and evaluation sheets. Tests show that the module and the Constructive Controversy technique are well received by both lecturers and students. The next step involves integrating the module throughout the ETH Zurich.

more (in German)

Project: System dynamic model of care givers for the aging

University of Applied Sciences St. Gallen, FHO

Family members play a central role both in outpatient and inpatient care for the elderly. Many of these tasks are self-sufficient and self-evident. Other tasks, due to the challenges of the care services themselves and in their environment, push care-giving relatives to their limits. Social and nursing organizations offer numerous support services – but what do they actually solve?

A model developed at the University of Applied Sciences St. Gallen delineates the dynamic interactions between the caregiver, the support network and the environment. This helps to understand nursing and care arrangements over longer periods of time and enables intervention assessment from various perspectives.

The working model was developed together with experts from different organizations and professions. It is a jointly negotiated view of the system behaviour of nursing and caring arrangements. These are proven methods of system dynamics, which have been used in various fields for a number of decades, but are still not widely used in the Swiss social system.

The model can be used to calculate how the system varies over time, by changing the input variables. The system dynamics modelling and simulation presents great potential for learning more about effects in complex related fields – for example the relationship between ambulatory, partial stationary and stationary measures in old age care – and also in other areas of social work.

more (in German)

Project: Innokick Master's programme: developing specialists in innovative thinking

HES-SO University of Applied Sciences and Arts Western Switzerland

One of a kind in Switzerland, the Innokick Master's programme at the HES-SO University of Applied Sciences and Arts Western Switzerland meets the needs of businesses that wish to hire qualified innovation specialists who are capable of managing complex interdisciplinary projects. This Master's programme seeks to develop creativity, intellectual flexibility and management skills.

Bringing together Swiss and foreign students from the fields of Design & Visual Arts, Engineering & Architecture, as well as Business, Management and Services, the Innokick Master's programme offers students the opportunity to develop the kind of business ideas that most customer-focused businesses want.

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Project: MEGANE PRO, at the forefront of e-health with robotic prosthetic hands

HES-SO University of Applied Sciences and Arts Western Switzerland

Supported by the Swiss National Science Foundation, the MEGANE PRO project from the HES-SO University of Applied Sciences and Arts Western Switzerland School of Business & Tourism Valais-Wallis, focuses on improving prosthetic hands. The aim of MEGANE PRO is to better understand of the effects of amputation and to improve robotic prosthesis control. The first multimodal database using both

intact and amputated subjects as well as mixing several different data sources, MEGANE PRO will improve patient rehabilitation and neuro-cognitive understanding.

The project includes the application of machine learning algorithms on multimodal data in order to perform movement classification for prosthesis control. The combination of multimodal data is expected to strongly improve the movement classification accuracy, and therefore the concrete capabilities of hand prosthetics. MEGANE PRO is expected to improve: knowledge in the neuro-cognitive field, the state of the art in hand prosthetics, and the clinical outcome of the patients (e.g., by better understanding the individual phantom limb phenomenology).

University Hospital of Zurich, Idiap Research Institute of Martigny, and Sapienza University of Rome are partners of this project.

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Project: Art for Ages group music to improve wellbeing of older people

University of Applied Sciences and Arts of Southern Switzerland SUPSI

The multidisciplinary research project Art for Ages measures the effects of group music making on the physical and mental wellbeing of residents in nursing homes. The project promises to be an important step towards enhancing the quality of life in nursing homes through sustainable interventions offered by skilled musicians.

Art for Ages participants sing or play rhythms with small instruments such as drums, maracas or sticks. Each session is conducted by an expert leader supported by trained music students. Songs are from the residents' youth or unfamiliar works in various genres including pop, folk, jazz and classical music.

The project is a collaboration between the University of Applied Sciences and Arts of Southern Switzerland (Department of Business Economics, Health and Social Care and the Music Conservatory) and the Royal College of Music in London.

Project: Swiss Competence Centre for Barrier-free Communication

ZHAW Zurich University of Applied Sciences
Institute of Translation and Interpreting IUED

The competence centre employs (computational) linguistic methods to support people with visual or hearing impairments and speakers with limited knowledge of the local language. The focus of the project is barrier-free accessibility to education and studies at all Swiss Higher Education Institutions (HEI). The Swiss Competence Centre for Barrier-free Communication provides tools, guidance and support for HEI students with impairments and also for HEI staff members to develop inclusive course materials.

Barrier-free communication aims to remove language and other types of barriers, using an array of translation and text-editing methods in the process. For instance, audio description transfers visual elements into spoken language for people with visual impairments, whereas re-speaking and speech-to-text reporting transform spoken language into written language for people with hearing impairments. Simpler, more comprehensible versions of complex texts are provided through easy-to-read language media.

swissuniversities has selected this innovative project in Swiss higher education policy to receive federal project contributions.

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Project: ExpAct – a software framework to access a wealth of experience

ZHAW Zurich University of Applied Sciences

When older people retire, valuable skills and expertise are lost to society and the labour market. For those affected, the step into retirement often proves to be difficult. ExpAct is an EU-project coordinated by the ZHAW. It aims to develop a software framework to create and operate platforms that support older people by making it easy for them to offer first-hand professional and life experience, while participating in social and professional activities. This experience can be of great benefit to profit or non-profit organisations, associations, and private individuals.

To facilitate successful matches and bring together those who offer experience with those who need it, innovative matching algorithms and a sensitive taxonomy are being developed. These will enable different kinds of experience to be entered and retrieved, ensuring a solution that is needs-based as well as target-group and market-oriented. The taxonomy considers not only hard skills but also soft and passion skills.

ExpAct will allow older people to share their experience with those who might benefit from it. Providing these people with the opportunity to be involved (again) in professional and social interaction will strengthen their self-esteem. ExpAct offers new challenges and activities, supporting and promoting active and healthy ageing. Society in general – and the labour market in particular – will benefit from having access to a wealth of experience.

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Project: Improving integration of mentally burdened young adults in the labour market

ZHAW Zurich University of Applied Sciences

The ZHAW Zurich University of Applied Sciences has developed an innovative intervention that includes psychotherapeutic support in a work integration programme for young people who have not successfully transitioned from compulsory education to upper secondary level. These young people are at increased risk of developing mental illness, as compared with their working peers. The causality is unclear: they are either unable to find a job due to a pre-existing mental illness, or their failure in finding a job has contributed to their mental illness.

Early intervention is important in these cases; studies show that the course of an illness can be positively influenced if treated early and without delay. As a consequence, the mental illness will not affect the professional and personal development of the adolescents any further. Future prospects remain. In contrast, it is shown that the longer the treatment of mental illness is postponed, the more significant the danger that the disease will become chronic.

Until now, occupational integration was mostly pedagogically oriented. To recognise and treat mental illness in a timely way, it is crucial to create low-threshold provision in an existing programme. The innovative ZHAW intervention, introducing psychotherapeutic support into a work integration programme, facilitates the dialogue between young adults and psychotherapists. This increases the chances of a successful transition to the labour market.

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Project: Integrating elderly migrants into their neighbourhood with Vicino

ZHAW Zurich University of Applied Sciences

As a source of social support, social networks in the neighbourhood take on more importance for residents as they get older. To date, there has only been peripheral research into the life situation of elderly migrants in their residential neighbourhood, and there are only few projects to improve the social integration of these people into their neighbourhoods.

The objective of Vicino is to provide guidelines for participatory incorporation of migrants into their neighbourhood. Promotion of social support in the neighbourhood ensures a higher quality of life in the local area and helps create a situation where elderly migrants can live independently at home for longer. The project also aims to strengthen cooperation between science and practice, and to link innovative research methods with interventions.

Formal and informal nationality-specific and language-specific networks are particularly important for people who are not very skilled in the local language. Smaller municipalities and rural regions are not able to offer much in this regard. The Vicino project actively addresses the target group through a successful outreach approach, with initial contact via key individuals, events within the group members' own structures and in their native language, and informal meeting points for making contact.

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Project: WeTakeCare, computer games for keeping fitter in old age

ZHAW Zurich University of Applied Sciences

Researchers in the EU-funded project WeTakeCare investigated the potential of new technologies and developed computer-based training games aimed at promoting physical activity among older people, thereby enhancing their autonomy. On a TV, PC or tablet screen, users see themselves as avatars that mirror their movements.

WeTakeCare software adopts an activity-based approach and has been developed in close cooperation with the user groups that are directly involved. For superior visibility, contrast on the graphs is very high. The large control buttons are blue, yellow, purple and black as surveys showed that senior citizens rejected the signal colours red and green. At the request of the users, a comic figure guides them through the game, offers new ideas for coping with everyday life and provides expert-vetted home-safety tips.

The aim is to enhance muscular strength, physical endurance and coordination. For instance, three-dimensional Sudoku puzzles exercise the mobility and strength of arms and shoulders. The labyrinth game prompts a vigorous walk through changing garden scenarios to exercise muscular strength, endurance and balance. Gamers can improve their memory and the agility of the lower extremities in the sitting dance game. Caregiving relatives also receive exercise and nutrition tips from WeTakeCare to ensure that they take care of their own health.

more (video)