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Teacher Professional Development and Social Networking: A Case Study of A Professional Learning Experience

Michelle Attard Tonna, Colin Calleja

Abstract - **The generation of social capital, viewed in terms of social capacity building, can have a learning dimension. Teachers' staff development is one area which can contribute towards social capacity building and socially committed teachers have an important part to play in generating social capital. This paper provides a critical review of current professional development processes in Malta with a focus on how different provisions are successful, or limited, in generating social capital and social empowerment. It also discusses the need for Continuing Professional Development (CPD) which capitalizes on practitioners' experiences, realities and the knowledge of the social context of learning. Research data, in the form of teacher narratives and one longitudinal case study, reveals the importance of the social dimension in CPD. The involvement of teachers in the Let Me Learn Professional Learning Process marks a proactive stance in teacher professional development and transformation through its emphasis on teacher networks, partnerships and externalizing teachers' knowledge base. It also demonstrates that social capital can be fostered when teachers learn together and collaborate.**

I. INTRODUCTION

In Bullock and Trombley's dictionary, social capital is defined as: the cultural preconditions of wealth production, especially the cognitive and social dispositions that enable individuals to acquire the skills needed for gainful employment [4].

In this paper, we shall attempt to discuss social capital at a different tangent. We digress from any monetary connotations and refer to it in terms of those networks, together with the shared values, norms and understandings which facilitate cooperation within and amongst groups of teachers. Our driving argument is inspired by Putnam's 'Bowling alone' metaphor [15] which depicts the decline of social capital in the United States of America since 1950. Putnam's thesis report on people's increasing disconnection from family, friends and neighbours and on their steady disengagement from a common public life. This alienation from one another and from one's social and political institutions has impoverished human life. Putnam urges the development of a social capital which facilitates cooperation and mutually supportive relations in communities and which would be a valuable means of tackling issues and problems inherent to the particular community [15].

Another strand in the social capital discourse, which further informs our discussion, is that taken by Burt [5] who explains that connections which people have, in terms of trusting relationships and support groups, render a social capital which, for certain individuals or groups can create a competitive advantage in pursuing their ends. Social interactions and relationships help to make accessible information, ideas and support to those members involved in the network structure

We have chosen to explore further this discussion and relate it to the professional lives of teachers particularly because although teaching is a social profession, teachers are often forced into isolation, through the fast nature of their work and the lack of opportunities which arise for them to collaborate and to construct a professional community in their school. The human, cultural and political dimensions in schools rarely allow the bringing together of teachers to engage in reflective, collegiate and experiential interaction that is increasingly considered as the basis of effective professional development [12].

We shall thus commence this paper with a brief discussion of the individualistic nature of the teaching profession and the gains that teachers can make when they form teacher communities. This is followed by a critical review of current in-service training provisions found in Malta. The strengths and limitations of such provisions, in terms of how these address teachers' social capital, are briefly discussed. Then we shall explain how a local in-service teacher education and training (INSET) initiative, namely the Let Me Learn Professional Learning Process, utilises teacher networks in order to strengthen the practices of teachers engaged in differentiated instruction. This learning process also aids in teacher transformation through knowledge gained from individual and collective resources and strengths. We shall conclude this discussion by proposing ways of how INSET initiatives can capitalise upon, and generate, teachers' capital and transform it into a social capital to the teaching community. We put forward the idea that social capacity building is one of the ways forward for teacher in-service education and training.

Michelle Attard Tonna is a teacher trainer working within the Directorates for Education and forms part of the team of the Let Me Learn Process which provides in-service training to educators working in different educational set-ups. Her primary research interests include the professional development of teachers and comparative studies of INSET provisions. She has participated in various conferences and European teacher networks in which she has presented her research. Correspondence to: Michelle Attard Tonna, Let Me Learn Rm 225, Department of Primary Education, University of Malta, Msida MSD 2080, Malta. michelle.attardtonna@gmail.com

Colin Calleja is a lecturer at the University of Malta, Faculty of Education. He is the coordinator of the Programme in Teaching for Diversity hosted by the Department of Primary Education. He also works closely with schools especially through the joint initiative between the Faculty of Education and the Directorates for Education, namely the Let Me Learn Process, a process which is successfully implemented in a number of schools in Malta and which he coordinates. Mr. Calleja is actively involved in a number of European projects on the application of differentiated strategies in the teaching and learning process. He is also the author of Differentiating instruction in the primary classroom: A whole school approach in achieving excellence and co-editor of Understanding children and youth at risk: Narratives of hope. Correspondence to: Colin Calleja, Let Me Learn Rm 225, Department of Primary Education, University of Malta, Msida MSD 2080, Malta. colin.calleja@um.edu.mt

II. A SOLITARY PROFESSION

Teaching is a solitary profession. Teachers spend most of their time isolated in classrooms with their students [1]. As Shulman [17] argues, there is probably more, and indeed a distinctive wisdom about teaching among practising teachers than there is among academic educators. Yet, this wisdom is isolated and unvoiced. Teachers work in lonely circumstances and it is difficult for them to articulate what they know and to share what they have learned with others.

The principles of collective rationality are indeed called for in a profession whose demands are so great for any one teacher to succeed as an individual. The range of talents required are too broad and varied and the requirements for learning from experience exceed the capacities of an individual learner. It is difficult for any teacher to monitor her/his performance with great accuracy; to act critically, decisively and self-correctively under conditions that do not promote or support these processes [18].

The individualistic nature of teaching and the lack of the social dimension preclude it from improving its efficiency by facilitated coordinated action [13]. This coordinated action can develop when teachers work with one another, scaffold each other's learning and help each other to question actively, critically and reflectively. Teachers can supplement each other's knowledge when they collaborate [17]; however, although the principle that teachers be given opportunities to learn from others is highly laudable, there are few facilitating structures, and even fewer incentives, for those who seek to collaborate. Oftentimes teachers are not afforded opportunities for authentic professional collaboration.

One of the most effective ways to promote professional collaboration is through in-service teacher education and training. During this learning process teachers can become aware that they form part of a professional community, a community that can nourish itself from the wealth of its own practice and experiences, both as individual resources and as collective experiences. We believe that if these professional communities are not nurtured, then teaching will continue to be doomed to professional stagnation and to limited critical reflection. As Carney comments (2003, 423), independent forms of behaviour place profound limits on deep, extensive and widespread professional growth.

Not all professional learning processes manage to create the ambience and the adequate support structures for these communities to develop. What follows is a critical review of the present in-service teacher education and training scenario in Malta with considerations of how the structure governing this provision is allowing or inhibiting the social dimension of learning.

III. THE CONTEXT

A. A review of INSET provision in Malta

INSET provision in Malta is of two kinds. Teachers can engage in professional education by undertaking post-graduate courses organised by the University of Malta and the various institutions which offer distance education opportunities. Options for further qualification have been significantly increased in recent years and a number of agencies for foreign universities, as well as academies and tuition centres for higher education, have mushroomed across the island.

Teachers also have the opportunity to undertake professional training offered by the two directorates within the Ministry of Education, Youth and Employment [2], this entity being the main agent in providing courses for all teachers in state and church schools [2,3]. Teachers in independent schools may also choose to attend such training, but often training is organised for them by the independent school in question.

The INSET programmes on offer, by the directorates for education, tend to fall under a top-down structure and address issues mainly at the system level that principally relate to policy and government-initiated reforms, but also to curricular needs that education officers, employed by the Ministry, perceive the need of addressing. Training is usually held during the three days prior to the teachers' commencing of duties in September, or immediately following the closure of schools for the summer recess. However, there are also a number of training opportunities, on a minimal scale, offered throughout the scholastic year, together with occasional scholarships and bursaries which teachers can pursue. These training opportunities are organised by the directorates for education, the Foundation for Educational Services and other training agencies at a local or European level.

A number of schools, and colleges, periodically decide to organise 'schoolbased' or 'in-house' training which is specifically directed to the teachers belonging to any one school or college and aims to address needs pertinent to the context in question. This autonomy in taking initiatives regarding training can help schools be more specific in addressing the particular needs of the school and staff. This kind of arrangement is in fact sometimes helping to increase the relevance of training to the teachers concerned and giving them the possibility to organise and provide part of the training themselves. Nevertheless, one must say that even when training is organised by the school itself, it often fails to use teachers' field experience so the learning experiences intended are not grounded in the lives of the practitioners.

The present structure of INSET provision is particularly effective in dealing with large populations of teachers. Indeed, a considerable number of teachers from all educational sectors receive training during a short period of time on an annual basis. Yet, notwithstanding the variety of training opportunities, teachers are still not sufficiently supported to address the several changes they are experiencing within their schools and classrooms. For instance, the new National Minimum Curriculum states that students should acquire a wider range of skills, greater flexibility and adaptability. Teachers of the different subjects and classes are thus expected to collaborate in the planning of projects centering around particular themes. They are also expected to deliver lessons taking into consideration the various levels and types of intelligence and attainment. However, despite the fact that teachers frequently express difficulties in acknowledging individual differences and in implementing inclusive policies, training in differentiated instruction is not being regarded as a national need.

B. CPD which promotes teacher collaboration

The new reform agreement between the Government and the Malta Union of Teachers, signed in July 2007, facilitates the possibility that teachers meet and discuss their work on a weekly basis [11]. However, a number of small schools are not managing to set up these meetings because of the shortage of teachers to replace those participating in the meeting. Moreover, the format of these meetings is often structured and follows a prescribed agenda, set by the head of school or college principal. We feel that this formality can inhibit teachers, to a large degree, from taking any spontaneous initiatives and from collaborating on common projects.

In our opinion, teachers should also be given the opportunity to meet a wider community of teachers than that within their immediate school context. At present, the only opportunity for this to occur is during a subject-based INSET course which is organised by education officers of the relevant subject for a number of teachers from different schools teaching the subject. Hence, although one needs to acknowledge that some favourable steps are taken to promote the development of learning communities, schools are to search for new and wider ways which enable teachers to meet and develop quality experiences out of these meetings. These teacher meetings, rather than being an end in themselves, should be considered as part of a wider approach to support professional development. They should be seen as opportunities where teachers can teach others the strategies that have been successful with their own students. In accordance with [8], we feel that schools should strive to develop networks of teacher communities (that go beyond the school or college in question) from these meetings.

C. Teachers' autonomy in CPD

Another aspect which is of concern in the present provision of INSET is that although efforts are being made for schools to become more autonomous, this is not always being reflected in the development of professional development programmes for the teachers concerned. Teachers are very often excluded in the decision-making processes regarding their training, and they are often subjected to forms of training which do not necessarily respond to their particular needs. This prescriptive approach does not encourage teachers to put forward their ideas and contribute to the learning process of their profession. If teachers' individual experiences are not externalised, it is all the more difficult for teachers to make use of them in their quest to build a social capital for their profession. Although workshops are sometimes organised within these courses for teachers to discuss issues, the three-day format of training is too short for any teacher educator to succeed in propagating a sense of community within the group and urge its members to generate a collective knowledge base from the collaborative activities that take place. More often than not, teachers attending INSET courses do not get the chance to meet the same group of teachers in the successive years; this makes it all the more difficult for them to build relationships of trust and collegiality, and for the teacher educator to document any activities effected from this collegiality.

D. Does the present provision allow and promote social capital?

Hence, the present training scenario is composed of large groups of teachers who are obliged, on an annual basis, to attend a training programme in the company of other teachers, who out of circumstance, happen to form part of the cohort. The design of these courses purports individualism because teachers are asked to attend solely on the basis of their respective duties/responsibilities within their classroom. Any opportunity to spawn further knowledge is largely lost because the lack of time, and format, of the training courses do not permit for this to be so. Partnerships between teachers and training providers are also rare occurrences. These collaborations need time to develop and at present the huge lack of human resources that the directorates are experiencing signify that teacher educators provide the training and get back to the multitude of duties they are burdened with.

What follows now is an evaluation of a particular in-service programme which forms part of the local Education Directorates' provision but which strives to depart from the governing structure typical to the majority of INSET models found in Malta and which specifically tries to form cohorts of teachers who gradually build learning communities within their group and within their school context. We thus present the methods of study we have utilised to evaluate this CPD approach, together with an analysis of the data.

IV. METHODOLOGY

The aim of this study has been to evaluate whether particular INSET provisions are being effective in cultivating teacher communities and networks that help to generate further teacher knowledge. The research has thus focused on two broad questions: Which are the right learning environments which enable teachers to meet and garner support from each other? ; Why do teachers feel it necessary to be part of a teacher community?

A. Data collection

The data collected regards one Continuing Professional Development process with which we are involved, namely the Let Me Learn Professional Learning Process. In order to understand teachers' dispositions to the social aspect of this training experience we randomly selected sixteen narratives from a group of teacher journals collected over a span of two consecutive scholastic years. These narratives, or journals, consist of a series of accumulated written reflections and form part of the required portfolio that teachers construct throughout their training to document their learning. A longitudinal case study of another teacher who has participated in this programme and who has documented, over a period of five years, the impact that this has left on her practice, has also been utilised.

Confidentiality of these narratives has been retained and only the initials of the participating teachers accompany the excerpts we are including in this paper. The reason for this is primarily because teachers, during this training programme, often disclose of intimate and personal details when raising issues concerned with their role and identity as teachers. A professional rapport based on trust is gradually built between the trainer and the group of teachers; this offers the

adequate space for such reflections to be externalised. Nevertheless, teachers often feel vulnerable in sharing their journals with a wider audience.

B. Data analysis

In our journal analysis we have examined the social and collaborative experiences in which teachers were engaged throughout their training. We have also evaluated what they claimed to have benefitted from these experiences and the evidence for learning propagated specifically from social encounters and teacher networks. We have also assessed examples of how teacher knowledge has been generated across the teacher cohort as a result of these social encounters. Our primary hypothesis has been that INSET which specifically addresses teachers' isolated practices, and attempts to develop teacher communities, is indeed a practice which aids individual teachers (their professional and personal concerns) and the teaching profession as a whole.

V. DISCUSSION

A. The Let Me Learn Professional Learning Process

Before presenting the data, it is necessary to enable the reader to understand the way the Let Me Learn Professional Learning Process is structured. The educational policy inherent in this learning process draws from the social capital theory, regarding the need for reciprocity and teacher networks. In contrast to some of the above examples, it respects teacher professionalism and collegiality, and is inspired by constructivist pedagogies.

The Let Me Learn Professional Learning Process is one of the few currently available programmes which is organised during the scholastic year on a structured and sustained basis. One of the advantages of this arrangement is that teachers are exposed to a much longer period to the training involved, and the teaching community that accompanies them during the training. Once the training sessions come to an end, they can choose to be mentored for the subsequent scholastic year in order to be supported in their new endeavours and any alternative practices they may want to carry out. This increases the course's effectiveness and the likelihood that what has been achieved through collegial interactions will not end abruptly once the course is concluded. Mentoring and other support structures are highly appreciated, as the following comment demonstrates:

After the last course I attended, I tried to do something new at our school and put forward some ideas from what I've learnt, but I felt discouraged by some of my colleagues as they said they preferred staying the way they were than apply new techniques; but as this course (the Let Me Learn Professional Learning Process) was offering mentoring and help, I realise that finally something is going to be done.
(R.M. Secondary School Teacher, Session 5)

In line with constructivist thinking, the training programme does not depart from any policy-initiated or institutional imperative imposed by the directorates of education. The learning objectives are continually evolving to meet the current challenges experienced by teachers. The aim of the training is to support teachers in differentiated instruction, but teachers start by defining their own needs, because although the learning objective applies to all teachers, the learning needs are pertinent to each individual teacher who attends. Hence, as far as possible the training is customised to each participant, who, together with a trainer, marks the priorities set to be achieved and works towards gaining the necessary skills to adapt to present and future challenges. The quest towards customising the professional development experience contrasts sharply with what teachers are usually subjected to, in other training programmes.

Although the role of the trainers is crucial, this does not render that of the teachers a participatory one. Teachers do not merely work in groups and do role plays. The whole training programme is devised, and developed, with the agreement and contribution of all the educators involved. This is in accordance to what Shulman [17] claims, that authentic and enduring learning occurs when the teacher is an active agent in the process. Teachers need to experiment and inquire, to write, to engage in dialogue and in questioning. Professional development should provide teachers with these opportunities and with the support required for them to become active investigators in their own teaching.

Shulman additionally stresses that teachers need to become reflective about their work, yet also admits that the nature of their work and conditions make it very difficult to do so, and they also lack an adequate discipline in documenting their practice. This makes it all the more important for teachers to team up with colleagues, who can help them observe or monitor their own teaching behaviour, thus transcending 'the limitations of one's own subjective recollections' [18].

One of the measures adopted by the Let Me Learn Professional Learning Process in this regard is that of teachers documenting their reflections in a journal and sharing these thoughts in groups. This exercise is an interesting and engaging experience and teachers can become aware of common challenges and dilemmas, and support each other; additionally, teachers are also asked to develop assertions about their practice as a result of this sharing. The outcomes are qualitatively different from mere acknowledgement and support (though important in their own right). During these journal-sharing sessions, teachers develop ways in reconsidering their experiences and attempt to make sense of them. They start questioning individual practices, in the full knowledge that the teacher community they now form part of can buttress their hesitance with the wisdom collectively nourished:

Now that I have gained this insight I think I can be more understanding, more flexible, and hopefully more patient as a teacher.
(D. F. Primary School Teacher, Session 5).

B. A collective learning experience

The data has revealed that teachers reach common understandings and also derive a sense of ownership from the whole process because future reflective practice is enhanced through these new perspectives they collectively conceive [10]. As the following observation from a secondary school teacher demonstrates:

I have started communicating with students in the way I have seen teachers doing on the DVD. I am also reflecting a lot. I have started observing the way I react, and whether my reactions are helping me become a good teacher.
Doing this course through online learning is not a good idea. Interaction among teachers is fundamental; you get to understand different scenarios and others' ideas contribute to help one address problems.
(M. C. Secondary School Teacher, Seminar 2)

Dogancay-Aktuna [7] speaks at length about teacher development processes which integrate the reflection-oriented approach and are grounded in teachers' exploring and reflecting on their classroom experiences. It is stressed that reflective practice should also devote attention to the socio-political role that the teacher possesses, an approach derived from critical pedagogy. Teachers, as transformative intellectuals, are expected to be socio-politically conscientious and empower their learners.
In line with this argument, we feel that a teacher's socio-political role needs to be extended to the teaching profession of which s/he form part. Thus, reflections and problem-posing activities within the training process are also intended to prompt understanding of behaviours. Teaching, as an activity, forms part of a larger cultural, discursive or ideological order and teachers need to be made aware of the global context of their work and how their local knowledge can contrast sharply with various other approaches to pedagogy. A critical awareness aids them to see, and respect, the broader social, historical, cultural and political contexts of teaching and learning. It also aids them to develop transformative learning activities that broaden learning environments beyond classroom walls. As one primary school teacher comments:

Hearing about the experience of a teacher employing the Let Me Learn strategies was a real eye-opener for me.
(D.M. Primary School Teacher, Session 2)

Having said that, it is difficult to expect teachers to engage in critical questioning, when many teacher education programmes still appear to focus on the subject-theory and methodology, at the expense of preparing teachers with political awareness. During the Let Me Learn Professional Learning Process, we often receive mixed feedback from teachers at being exposed to a dose of critical pedagogy which has often been absent in past training. While teachers express relief at having attended a course which empowers their thinking and enables them to become articulate and questioning of their surrounding realities and social roles and responsibilities:

Above all this course has taught me how important it is to stand back and assess myself as a teacher. I discovered that I needed to change my attitude towards my students.
(D.F. Primary School Teacher, Session 5)
they also often find it difficult to embark on this journey. As Shulman points out, this requires scheduled time and substantial support [17].

C. Generating social capital

The narratives we have analysed demonstrate that the discussions and workshops which are organised during every training session help to develop a collective reality which draws the focus away from the individual teacher's tribulations to a realization that collaboration can contribute to each other's success. In the same way, the individual teacher's realities are juxtaposed against a collective experience and one teacher's strengths become the strengths of the whole group. So, apart from the fact that collegiality helps teachers to find respite from their isolated work lives and discuss professional matters, the professional community established helps to maintain quality teaching practices because teachers are empowered to adopt teaching methods through collegial relations. The following excerpts from teachers' journals illustrate this point:

What I liked most in this seminar was the experience of a primary school teacher attributing the Let Me Learn with the Year 3 class. Her belief in the process has started to convince me that it can really work in practice after all.
(D. F. Primary School Teacher, Seminar 2)

I found myself telling others how to go about it because I had lots of ideas, which I knew were good. I hoped others would pool in ideas so that I would widen my perspective and gain more ideas myself.
(E. F. Primary School Teacher, Session 1)

Effective approaches are developed in the training with the intention of drawing on and building social capital. One approach which seeks to accumulate teachers' wisdom is the externalisation of tacit knowledge. Each teacher has a wealth of wisdom, a tacit knowledge base which is largely unexposed and not articulated. The Let Me Learn Professional Learning Process continually seeks to expose this knowledge and to generate its wisdom to the rest of the community. Teachers' journals document the benefits of this approach:

Together we started to learn from each other … I learnt a lot from the people around me. The sessions I attended were important as we learnt from one another.
(C. S. Primary School Teacher, Session 5)
The first step in the externalising approach is a deconstruction process which enables the teachers to appreciate their valid practices and recognise any alternative practitioner knowledge which is worth receiving. As Whitehead and Fitzgerald [20] maintain, the act of teaching is not amenable to finite mastery and new and alternative understandings can emerge from within practice, both for themselves and their trainers.
This generative approach is sustained by the trainers who are committed to disseminate teachers' practices, hence helping to systematise the knowledge that is gained over time. Teachers are given the opportunity to connect to bodies of knowledge developed by other teachers and receptive spaces are created for this knowledge to be experimented with, questioned and sustained in future mentorship sessions. This climate of openness and trust could only be made possible because the training is spread along a number of weeks. This gives the trainers, and the teachers themselves, the chance to act as critical friends by sharing professional

knowledge and engaging in dialogue to inform different ways of thinking and acting.
Narratives have also shown that an effective professional development experience builds on a relaxed, non-threatening environment which makes social interaction possible:

The group is very small compared to other courses I attended and this was a sigh of relief as it gave us a better opportunity to discuss and share ideas better.
(C. Z. Secondary School Teacher, Session 1)
Being seated in an informal manner, with everyone facing each other, made it quite easy for us to get involved.
(D. F. Primary School teacher, Session 2)

Another approach implemented in this training process with the intention of generating social capital is the building of teacher networks. Social capital is produced and generated at levels of interactivity. As Bidwell and Yasumoto (as cited in [19]) maintain, the intense interaction with colleagues makes teachers more prone to collegial influence and persuasion. Communication is facilitated in activities in which teachers work together and collective beliefs and trust among group members are reinforced (Friedkin 1998; Lin 2001 as cited in [19]).
The research data demonstrates that effective collaborations indeed help to increase social capital or resources stemming from social relations. In the journal entries, teachers report that thanks to the interactions nurtured within the training, they were able to improve the quality and effectiveness of their teaching practices. Unfortunately, such collaborative encounters are not always possible within the school, as one teacher reports:

We had time to work and talk with other teachers. I must say that at school we hardly ever have time to collaborate with our own colleagues.
(E. S. Primary School Teacher, Session 5)

Another example of effective collaboration is found in the longitudinal case study which forms part of the research data. This study reflects that the teacher undertaking the training succeeded to impart her knowledge to the rest of the school. While attending for the training sessions, she took the responsibility of informing her colleagues of new ways of engaging with her student (suffering learning difficulties); she also held meetings with the leadership team during which she discussed new practices and proposed actions which were not necessarily congruent with the usual directives reserved for students in similar situations. The school environment was totally supportive and conducive to the new practices that this teacher was proposing. The knowledge gained by this individual teacher succeeded to be extended to the rest of the professional team. A common language was created and the whole group of teachers started to employ common strategies with the mentioned student.
This latter example has enabled us to make a number of observations. We have realised that flexible grouping of teachers is very important, because while it is beneficial for educators from different schools and levels to come together and expose themselves to different experiences, it is equally important to form groups with a commonality of purpose, as this often provides an impetus for the community in question to take action. As Yasumoto, Uekawa and Bidwell (as cited in [20]) point out, teachers' interactions can improve the quality and effectiveness of certain teaching practices, which in turn can affect student achievement. This signifies also that the stronger the social relationships among the teachers in a school, and the more committed they are to collective goals, the greater is the gain in the school's mean achievement.
Furthermore, the organisational factors particular to each school can either facilitate, or impede, progress toward a professional community. Promoting collegiality among teachers is not enough if this is not sustained by the schools within which teachers work [19]. The leadership style of the school and the approach taken to school level change are two of the several issues that influence the degree to which the professional community is achieved. Throughout our experience we have come into contact with a considerable number of schools, most (if not all) of which are burdened with time constraints that work against the possibility for teachers to attend training, to meet and to collaborate. Yet the difficulties primarily lie with the school culture, rather than with organisational and material issues. As Scribner et al. [16] argue, some school cultures are incongruent with a professional community because the set of shared norms and values, the focus on student learning, the reflective dialogue, the deprivatisation of practice and collaboration are lacking. By contrast, others manage to become communities of learning because they recognise the importance of teachers' continuing development as being essential to the maintenance and the raising of standards of pupil progress and achievement [6].

D. The advantages of mentoring

We additionally believe that a system of mentoring and co-teaching which forms a substantial part of the training structure is helping social capital to be generated. Besides the fact that mentoring contributes to the effectiveness of the programme, as has been mentioned previously, the generative approach that the trainers take to mentoring takes into account the contextually specific knowledge and insights of teachers whose practical actions and values are integral to the formation of their own professional knowledge, identities and competences.
This epistemological base for professional learning is not premised on the traditional hierarchy between mentor and trainee. Although it is acknowledged that the mentor has the responsibility to train and support the trainee, s/he does not assume the role of an expert. New learning opportunities are recognised which do not necessarily include an identified body of professional knowledge, or competences, prescribed by the mentor. All partners are actively involved in the formation and reformation of the knowledge base of the profession. Professional knowledge emerges from reflective dialogue between mentors/trainers and trainees [20].
This undoubtedly requires that the relationship between the trainers/mentors and trainees is characterised by mutuality and co-development; a relationship premised

on trust and respect for each other, open-mindedness and a desire to listen to alternative sides and consider alternative possibilities. Hence we try to ensure that the professional development practices within the Let Me Learn Professional Learning process are inclusive and democratic. Teachers repeatedly refer to this democratic relationship in their narratives:

I did not think it was going to be that friendly. The trainers made me feel relaxed.

(D. M. Primary School Teacher, Session 1)

The trainer co-plans the lesson s/he would be about to observe with the trainees, enabling them to become genuine stakeholders in their own professional development. Such a process empowers both trainers and trainees to consider themselves as creators of professional knowledge, enhances their learning and contributes to the learning culture of the school.

In order for the mentoring to be generative in nature, it is equally important for the schools concerned to offer their support. When schools recognise the potential of this approach in supporting the further development of teachers, they create opportunities for the trainees to meet their mentors on a regular basis. On the other hand, the reality in other schools is such that most of the curricular decisions taken serve to constrain the practices of mentors (and experienced teachers) and limit their scope to generate and share their professional knowledge with other teachers.

Experience in the professional development field has taught us that there are often positive outcomes to be gained when teachers undertaking training are teamed with more experienced teachers in their school. This is made feasible in those schools which include teachers who have in the past undergone training in the Let Me Learn Professional Learning Process. As Whitehead and Fitzgerald argue [20], novice teachers can gain more access to 'practical classroom knowledge' and there is a bigger likelihood of teacher-centred knowledge to be created. Such a model contrasts with the more static model of knowledge created by researchers, applied in a linear way by teachers and in turn, disseminated to trainees. This socialisation process of co-teaching has been effective in transmitting tacit knowledge and skills from teachers/trainers to other teachers. The narratives witness multiple examples wherein the trainees themselves create new learning experiences, because the structure of this CPD process is flexible enough to permit teachers to make important choices regarding their work. Teachers find this empowerment liberating, especially if they work in contexts which hardly allow them the opportunity to take decisions and be participant in their own teaching experience. As one frustrated teacher explains, the restrictions that she is increasingly experiencing in her work are inhibiting her from conducting her work in a professional manner:

Unfortunately, I don't feel I have the right environment as regards to space and resources. Moreover, I feel there is lack of support from those who keep disregarding our professionalism by imposing their new ideas without seeking our input. I feel that I used to be a better teacher when I had time for discussions and flexibility to conduct my lessons. Now we are made to rush through everything so as to achieve the set targets. This pressure is hindering me from working to my best potential.

(C. S. Primary School Teacher, Session 3)

VI. CONCLUSION

In order to sum up this discussion we shall now briefly outline a number of factors, already explored, that are related to the effectiveness of professional development processes in generating social capital. As the critical review of present INSET provision in Malta demonstrates, most of the approaches to professional development do not deliberately draw on and build social capital. The social dimensions of learning and the possibilities for social regeneration and capacity building are not sufficiently exploited. The way the training is structured does not allow for any relationships of collegiality and trust to be developed with the trainers and the rest of the teachers; moreover, training is often disconnected from real teaching experience as teachers are not given the opportunity to experiment and return with feedback, or receive support. The training objectives and knowledge imparted do not originate from the teachers themselves and more often than not, these reflect policy directives which are not necessarily congruent with the challenges teachers are experiencing at present.

In contrast, the way the Let Me Learn Professional Learning Process is structured and conceived affords teachers the space to critically deconstruct their practice and think differently about their engagement in education with a view to providing a socially empowering education and fostering greater social capital. The learning process is built around activities that help the teachers to experience challenging situations in teams and reflect about them. Role-plays are held featuring situations of possible conflict and teachers are thus given the opportunity to externalise their frustrations, problematise them and define the process. Teaching successes are also replayed in front of an audience and through mentoring and coteaching, it is ensured that valid practices are made public and repeated. Furthermore, the training sessions permit strong empowering social relations to develop, with the ensuing benefit that these relations can well and truly generate further wisdom to the profession.

Nevertheless, we recognise that the training programme, on its own, is not enough to induce transformation. As Shulman [17] maintains, authentic and enduring learning works best when the process of activity, reflection and collaboration are supported, legitimated and nurtured in a community or culture that values such experiences and creates many opportunities for them to occur and to be accomplished with success and pleasure. Hence, teachers must be provided with facilitating structures to work with one another and the entire school community should be committed to a collective set of goals. Only in this way can a professional development process be said to be contributing to the generation of capital within the teaching community.

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Information Technology in French Education and Industry, along with Other Convergences

Michel Eboueya

***Abstract*—Although education professionals agree with politicians on the potential impact of IT on Higher Education, their objectives are not the same. Professors are using all means to enhance the quality of their teaching. Politicians must meet the demand of citizens by enhancing their productivity.**

The French Education Model differs from the American model, and is integrated in the whole European Model of Education. We give an overview on the links between the use of IT in Education and the role of IT Industry, which stores and transmits ever-growing amounts of information. The resulting outcome is a new culture of openness in HE, using Open Educational Resources, and the deployment and use by enterprises as well.

I. Introduction

IT is now obvious, through different reports and orientations, that the French government is using IT to improve its internal as well as external processes. France is also reaching out to its citizens to increase the quality of education through the internet access and usage.

The scope of this paper is to show from the differences of behaviours, how convergence activities are leading to a high quality of results (men and product) towards cloud computing.

This broad subject is concerned with technology and other aspects of managing and processing information, especially in large organizations. In particular, IT deals with the use of electronic computers and computer software to convert, store, protect, process, transmit and retrieve information. IT is also known as Information and Communications Technology (ICT):

Higher Education is now considered as one of the most important issues for the new century; it serves several important functions in the society, the main one being production of knowledgeable individuals who will contribute to the society.

There are optimistic predictions on the potential impact of the Internet to transform the Education process for solving the economical aspects of the growing problem of mass education. Professionals agree with politicians on the potential impact of IT on Higher Education, but their objectives are not the same: Professors are looking at means to enhance the quality of their teaching. [4] Politicians must meet the citizen' demand of productivity. Technology vendors need to be aware of the trends that are taking place in France. The development of IT, the motivations to use it and the pressure to change the old ways of teaching are thus depending upon a number of factors: the structural organization of Higher Education, the needs of students and how it may influence the system, and the relationship with the industry and its demand [2, 3]

The context of this work is also is to discuss how far firms that wish to work with universities to gain access to new technologies, to the knowledge of future technologies and their possible impact and to technical problem-solving capability: it is interesting to demonstrate how the use of Open Educational Resources, on a meshed architecture covering the whole country, can play a momentous role in moulding a committed and motivated pool of students and employees, the link between Education and industries in France is converging for better production of skilled people for the industry. [1]

The paper is organized as follows. Section 2 gives a brief overview of differences between European and American Universities' economical models. In Section 3 Open Educational Resources are presented as one of the best way to converge. In Section 4, the functionalities of the the French academic network RENATER, as a means of increasing networked universities and companies using IT in France are presented. Section 5 French displays some fields of university-industry interaction which provides industry with an opportunity to grow its business by using the results of academic research, where at the same time, university is in need of a partner that can take its discoveries/research findings to the market place. At the end of the paper, the importance of IT with its potential extension to cloud computing, shows that the interfacing of university - industries could provide graduates and post-graduates workforce, employable by the rapidly growing IT and ITES (IT enabled services). [1]

II. The European vs US Model

The economical model of European universities strongly differs from the business oriented American model.

In the USA, the use of new technologies may help in making the difference with other institutions in the area, to attract young people and donations from sponsors. In Europe, Universities have more to answer to a social demand than to customers. IT is seen as a partial means to answer to it.

US universities are "market-oriented" as they must compete to find the funds thus they must enlarge their recruitment recruitment pool and enrol as many students

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M. Eboueya is with the La Rochelle University, As Associate Professor in the Departement Informatique, Pôle Sciences et Technologies; Avenue Michel Crepeau, 17042 La Rochelle Cedex 01, France (phone: (+33)(0)-6-88-21-62-53; fax: (+33)(0)-5-46-45-82-42; e-mail: michel.eboueya@univ-lr.fr).

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as possible. Universities are independent companies, their just react to their local environment and students are customers. [4]. The strategy is decided at the local level. So the autonomy of US universities is much greater: diplomas are granted locally, influencing many factors (what a diploma means, how to deliver it and how to control the level of the students) and courses are opened when the demand is large enough. The use of IT is expected to: enhance the efficiency of teaching, attract customers, be able to respond to the demand of part time students and give a good image of the institution and to find sponsors. There is a hope that IT is a good part of the means to answer the demand of the customers (the students) and of the funds providers. [4]

What about the European Educational Model? In Europe, the State which is generally the main provider of funds gives strong guidelines to the University to fulfil its mission. At the same time, there is (was) much less competition among universities. This means that the driving force towards the use of new technologies strongly differs. The university model is still not business - oriented: learning and teaching are under State control, either centrally controlled as in France or locally as in Germany. Delegation is given by the State to fulfil a mission. Thus the influence of the State through its funding and its demand is of the uttermost importance.

In the European Educational Model, diploma and courses are controlled by national agencies, standardization is under way, at a European level, as universities are still submitted to a number of regulations and are less free to innovate. Staff is still often under state control (civil servants, state employees…) and universities have fewer reasons to compete. The best ones do not resent IT as a means to attract students, as they rely on their reputation, the quality of their teaching, the opened opportunities for the students who receive their diploma. Fees are very low, which means that universities have less money, that there is not a clear relationship between the student's demand and the availability of means for a given course. The main figures in French Education in 2008 were:

- 12 million students - 830 000 teachers - Ministry of Education
- 60 000 elementary schools - towns
- 7000 junior high schools – departments
- 2 600 senior high schools - regions
- 1 800 vocational high schools - regions
- 31 teacher colleges (IUFM), 310 universities or engineering and technology institutes.

The French goals of IT orientations are to prepare the future citizens to the information society, using technology as a catalyst for better learning, better teaching (ICT in the society , French Next Generation Internet Foundationhttp://www.fing.org/), while sustaining the production of multimedia resources (Infrastructures: equipment, learning environment) developing "best" ICT uses, curricula (http://www.agence-usages-tice.education.fr/index.htm) and training staff and teachers. [9, 10]

III. Open Educational Resources

Open Educational Resources (OER) are digitized materials offered freely and openly for educators, students and self-learners to use and re-use for teaching, learning and research.

There are few as restrictions as possible on the use of tresources: no technical barriers (disclosed source code), no price barriers (no subscriptions, license fees), and as few legal barriers as possible (open licenses). [5] In HE, use and production are still mostly a bottom-up activity. Instructors and researchers from all fieldsare involved, but the education sector seems most interested.

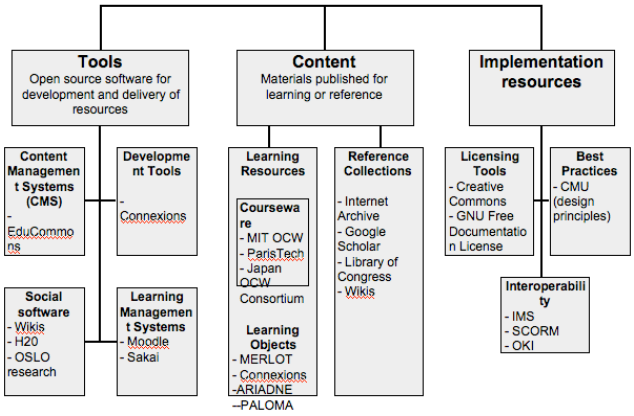

Fig. 1. The Open Educational Resource [5]

Institutions involved are mostly using their own resources or a mix of own + external public funding. Most institutions and individuals co-operate, but about 1/3 work alone. The most significant barriers to use OER are the lack of skills and time, and the fact that the reward system for teachers devoting their time to use and produce open content is just coming slowly. The use of OER in teaching is often a supplement used for its flexibility and quality. OER are mostly smaller chunks of learning materials, and the lack of time, skills and reward system are reasons for people not to use OER. The main challenges for the OER movement are the quality and relevance of resources, the combination of traditional academic processes with web technology. Here, the concept of quality is somewhat different – more related to the use and the situation, than to the product, and there are new technologies to facilitate the searching for relevant resources (folksonomies combined with automatic metadata harvesting)

Three (or four) main problems exist around Intellectual Property Rights (IPR): too strong copyright regime (or too rigid interpretation) hinders the use of ICT in education, along with practical difficulties: obtaining rights to use content is highly time consuming and expensive. [5, 6]

The awareness about copyright and open licenses is too low among academic staff: everything *not permitted* by the copyright holder *is prohibited*.

The uses of OER allow universities to stay up-to-date and to keep advanced levels of knowledge in different fields. In a knowledge society, industries are the main users and beneficiaries of such knowledge, this knowledge needs a physical infrastructure for delivery.

IV. THE RENATER NETWORK

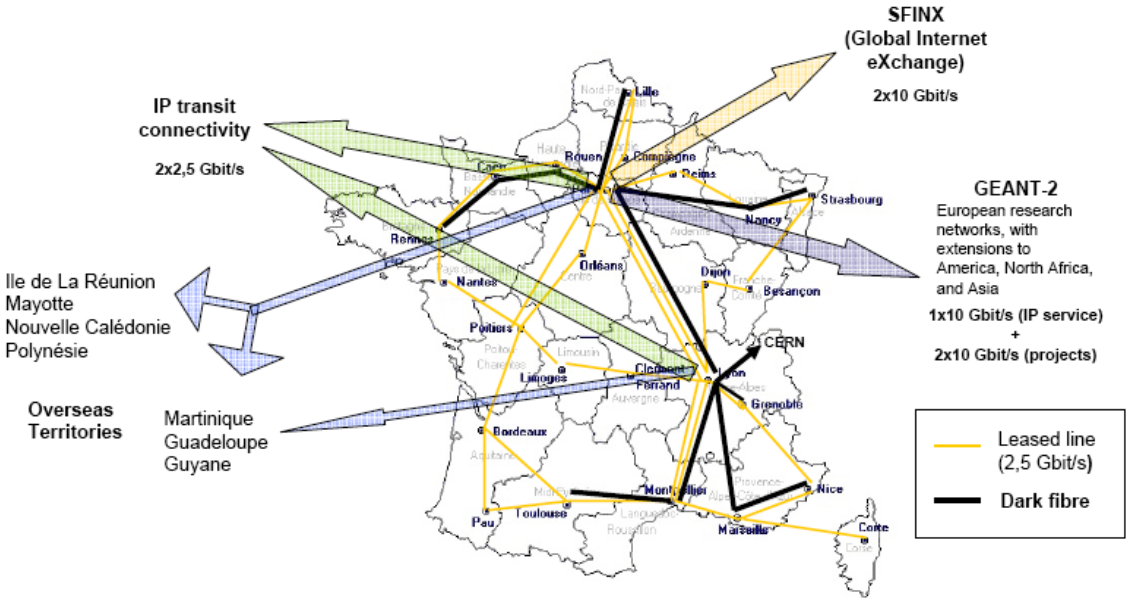

Fig. 2. The French network RENATER [7]

RENATER is the French academic network (Réseau National pout la Technologie l'Enseignement et la Recherche). It is based on about 30 POPs (Points of Presence) distributed in France (at least one POP for each French geographic region) on which are connected metropolitan and regional networks. (from Franck Simon, Technical RENATER Manager). More than 800 sites (mainly Universities, Research centres…) are connected to RENATER network via metropolitan and regional networks.

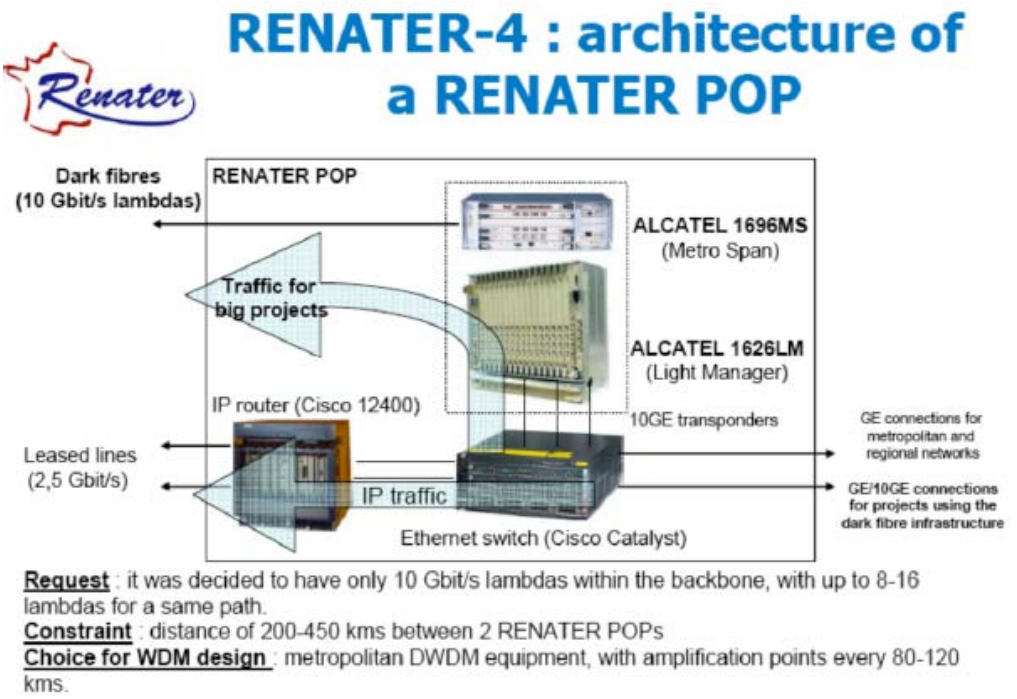

Fig. 3. A Renater Pop [7]

The RENATER-4 DWDM (Dense Wavelength. Division Multiplexing) infrastructure is first dedicated to projects requesting a lot of bandwidth, meanwhile all the "basic IP traffic" is carried via the leased line infrastructure (n*2.5Gbit/s links):

• GRID-5000 (5000 CPUs distributed in 9 sites for research in Grid Computing): http://www.grid5000.org

• LHC (Large Hadron Collider) :http://lhc.web.cern.ch/lhc/

• DEISA (Distributed European Infrastructure for Supercomputing Applications) : http://www.deisa.org/.

This is about to be completed, in order to deploy dark fibres for the interconnexion of the main RENATER POPs within and around Paris. The next step for the RENATER-5 national is a backbone which acquire some more dark fibres in order to be able to build a meshed architecture (instead of the current star architecture), with high availability, so that there will be lambdas for « production traffic « and lambdas for « projects " . It will then remove progressively the STM-16 links connected to the routers.

V. FIELDS OF UNIVERSITY-INDUSTRY INTERACTION

Industrial enterprises act at all levels of value chain: product design, production process, relationship with suppliers and customers.

The goal of business is to improve, by adapting their organization, to share the characteristics of their products : price competitiveness but also quality, variety and novelty. Skills, technology and processes are important in the production phase..

A comparative analysis of companies based on their organizational and uses of computer allows us to identify two situations: high or very poorly equipped ICT, as well as several models of organization. [11]

A. What Needs to be fulfilled : the plan from [8]

A plan for the development of digital economy, able to put France among the great nations by 2012 has been launched by the French Prime Minister, Mr François Fillon. The plan proposes more than 150 actions, related to four high priorities:

Enabling all French people to access networks and digital services,

Developing production and supply of digital content

Increasing and diversifying uses and digital services in business, government and homes,

Modernizing the French governance of the digital economy

The priorities for developing IT Market as stated by Eric Besson, former Secretary of State for the Evaluation of the Public Policies and the Development of Digital Economy are:

- How to enable all French people to access digital networks;
- General access to fixed broadband Internet Ensuring access to the Internet mobile broadband for all
- ….
- How to develop production and supply of digital content
- Improving the dissemination of film content, audio-visual and musical
- Securing (Guaranteeing) the status of the host data …
- Diversifying and using digital services
- Ensuring the protection of personal data
- Renewing governance and the ecosystem of the digital economy
- Stimulating research and development in ICT

The broadband Internet is today, a necessity like water or electricity. In the 2nd quarter of 2008, France had 18 million subscribers including 16.7 million Internet broadband (61% penetration), most using ADSL. [8]

The coverage rate of the population by the different access networks, leaving nearly 2% of the French population, spread over a significant fraction of the territory, not served (1 to 2 million French).

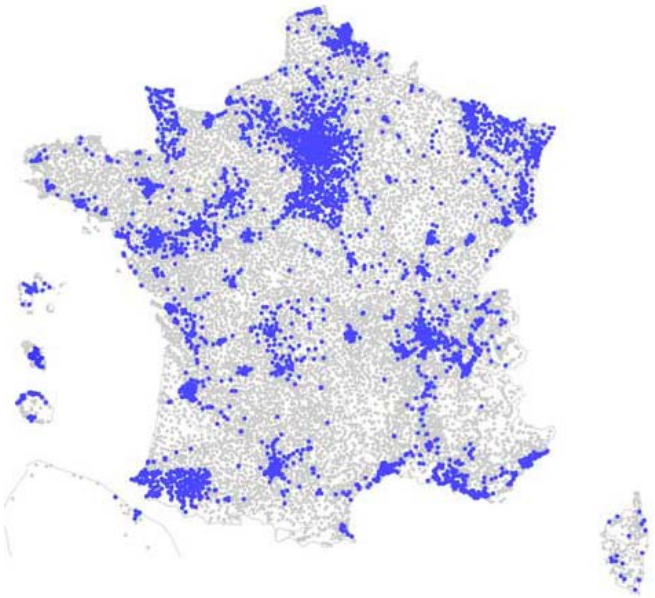

Fig. 4. Map of France mobile broad band [8]

The new uses of the Internet (television on demand, online photos and videos , high-definition files), require continuously rising flows and setting and implementation of new networks: the very high speed.

High speed through the use of optical fibre network must be available to more people, users and businesses and open to competition. The sharing of infrastructure between all networks will also be deployed at a lower cost, and technical regulations related to optical fibre networks for air and underground will be simplified

very soon, in order to facilitate their deployment. The use of air power grids will make it possible to divide by two the cost of deployment.

Whilec ERDF[1], a subsidiary of EDF which manages about 95% of the electricity network distribution (1.2 million km) is in charge of 12.000 km of landfill per year, by assigning the 790-862 MHz band to electronic communication services, France wants to ensure access to mobile broadband.

As the target is the Internet for all, if 3G coverage in France reaches 70% of the population today, more than half of the territory remains excluded from mobile broadband.

Frequencies lower than those of 3G are needed. And an authorization was given in February 2008 to three operators (mobile phones) to reuse 900 MHz frequency band for 3G .

On-demand computing ushered in an age of low cost, high performance, and high availability solutions delivered through the Internet have taught the industry that it could and should expect more for its investments. More than ever, there are Increasingly Networked Universities and Companies using IT. The context is ready for cloud computing, a real convergence.

"Cloud computing comes into focus only when you think about what IT always needs: a way to increase capacity or add capabilities on the fly without investing in new infrastructure, training new personnel, or licensing new software. Cloud computing encompasses any subscription-based or pay-per-use service that, in real time over the Internet, extends IT's existing capabilities." [2]

VI. Conclusion

The above fields of interaction can be achieved by mutual beneficial relationship; the government is then to promote university-industry interaction. And the following steps are undertaken in the context of that collaboration:

- Establishment of university-industry partnership / interaction cell in all French universities
- Organising workshops, conferences & symposia with joint participation as the EUE-net partnership.
- Participation of experts from industry in curriculum development.
- Professional consultancy by the faculty to industries.
- Visits of industry executives to the university and delivering lectures on industrial practices, trends and experiences, in French Bachelors and Master Degrees.
- Joint research programmes through some grants (Bourse Cifre)
- R&D laboratories sponsored by industries at the university I, many research contracts
- Scholarships/fellowships granted by industries for students.
- Practical training of students in industries. [3]

Apart from industry associations, the universities have strong linkages with government agencies, which are engaged in industrial development activities.

The overview on Information technology and its utilization for communication, has aimed to make to make available some statistical surveys about information technology and the information society in France.

[1] (Electricité Réseau Distribution France)

[2] http://www.infoworld.com/d/cloud-computing/what-cloud-computing-really-means-031

Acknowledgement

The main references of this text are papers and surveys on Information and Communication Technologies (ICTs) conducted by the Service des études et des statistiques industrielles (**Sessi**) [11, 13] of the French Ministries Public Relations and Communication Directorate; and from the European OECD (Organization for Economic Co-operation and Development). [5]

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Career Seminars As Employers` Contribution to Students Preparation for the Labour Market

Kristel Habicht, Madli Krispin

Abstract— **Estonia's economy has experienced very strong growth in the last three years. During that time economy has expanded by more than a quarter in real terms and almost by two-thirds in nominal terms. This has been achieved at the expense of taking very high risks. Now some of these risks have materialized, bringing the economy into a recession and uncertainties surround also growth expectations in 2009.**
At the end of the growth period, the economy reached the stage of full employment and thus slower growth was inevitable (Bank of Estonia, 2008). The full employment meant that many students had part or full time jobs. The whole economic situation enabled to find a job of the beginning of the studies and companies employed partially prepared students. At the same time employers were not pleased with student's preparation for the labour market. Careers Offices in Estonian universities are responsible for students` preparation for the labour market. Most of the offices have own staff, but in Tallinn University of Technology (TUT) we have involved enterprises and HR specialists.
Call for enterprises was unquestioned and well accepted. Students are satisfied with the possibility to develop their soft skills as well as contacts with employers.

I. Introduction

Estonia's economy has experienced very strong growth in the last three years: during that time economy has expanded by more than a quarter in real terms and almost by two-thirds in nominal terms. This has been achieved at the expense of taking very high risks. Now some of these risks have materialized, bringing the economy into a recession and uncertainties surround also growth expectations in 2009.

At the end of the growth period, the economy reached the stage of full employment and thus slower growth was inevitable. Since a large part of the resources were employed, the labour market started to hinder growth and strong wage pressures emerged. The opportunities of working abroad caused additional pressures.

In the years of rapid growth in labour demand, the employment rate grew mainly on account of those residents who would have had more difficulties in getting a job if the demand for labour were lower (e.g. the retired, young people) (Bank of Estonia, 2008).

In the full employment stage a large number of students had either part- or full time job, e.g in 2006 59 percent of student in Estonia had a job and 56 percent of them had full time job. The main reason for working was the need for extra money (82%) and the second reason was specialized work experience (52%) (EÜL, 2007) (fig.1)

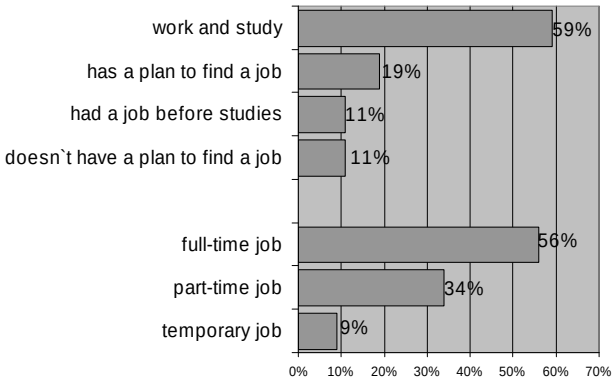

Fig. 1. Students job activeness

The economic situation enabled to find a job at the beginning of their studies and employers employed partially prepared students. At the same time employers were not pleased with students` preparation for the labour market and the reason was not the preparation on their field. Employers` feedback showed that in addition to knowledge on the field, universal knowledges as well-critical thinking, learning, social, self-expressions skills etc, were emphasized (fig. 2) (2007). Many teaching methods do not enable to develop these skills enough.

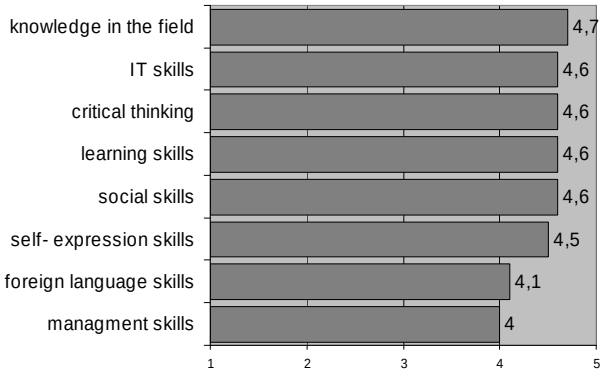

Fig. 2. Importance of students skills for employers

The second half of 2008 differs from recent years by robust corrections on the labour market: unemployment soared and wage growth came to a drastic halt. The number of the employed started to decrease already in the second and third quarters of 2008, though relatively modestly. Compared to earlier periods, employment declined around 0.2–0.3% in both quarters, which means that the employment rate did not change, as the total working age population decreased to a similar extent. Since labour supply grew, as numerous school graduates entered the labour market, the number of the economically

Kristel Habicht is careers officer of Careers Service of Tallinn University of Technology, Estonia (phone: +372 6203518; e-mail: kristel.habicht@ttu.ee).

Madli Krispin is head of International Relations Office of Tallinn University of Technology, Estonia (phone: +372 6203502; e-mail: madli.krispin@ttu.ee).

inactive diminished and unemployment growth surged. In the third quarter, the unemployment rate rose to the highest level of the past two years (6.2%) and the number of the unemployed climbed to 44,000 (fig. 3).

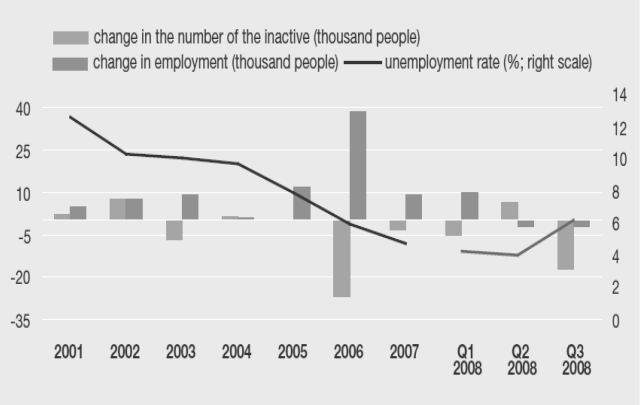

Fig. 3. Main labour market indicators

In the third quarter of 2008, unemployment grew in all age groups. Growth was especially pronounced among the young, as school graduates aged 15 to 24 started to look for a job and unemployment rose to 14.7%, meaning that almost every seventh young jobseeker remained unemployed. The unemployment rate of people in their prime working age (25 to 49) increased to 5.1% and that of the elderly (50 to 74) to 4.8% in the third quarter (Bank of Estonia, 2009).

II. CAREERS OFFICES ROLE IN UNIVERSITY- STUDENTS-ENTERPRISE MODEL

Careers Offices in Estonian universities have many duties, but one of them is the student preparation for the labor market. Although the offices are quite small, many of them have their own staff for the service. We offer job-related information, provide individual counseling and advice on job market matters (CV, interview, job hunting strategies etc.) and organize employers` presentations. In TUT we have roped in enterprises and HR specialists. The main reason use employers as lecturer in career seminars was that they have newest practical knowledge about the field and labour market situation compared to academical studies that give more book knowledge. The call for enterprises was unquestioned and well accepted. Students are satisfied with possibility to develop their soft skills as well as contacts with employers.

Some seminar themes:

1. How to find a job what makes you happy?
2. How to prepare you CV and for interview?
3. Salary negotiations for beginners and intermediates
4. How to gather knowledge and skills that draw distinctions between you and others
5. Career for entrepreneurs
6. Career through the life

Some comments from students` feedback: *“I got very practical knowledge and contacts as well”, “I got information how to sell myself better”, “I understand the salary concept now better”, “I listen to the seminar by mouth open!*

III. CONCLUSION

In today’s economic situation it seems even more important to give this kind of preparation that help students to find their own way and stimulate creative thinking.

These seminars stimulate the entrepreneurial mindset of young people, innovative business start-ups, fosters a culture that is friendlier to entrepreneurship. One of the important roles of education in promoting more entrepreneurial attitudes and behaviors is now widely recognized helping young people to be more creative and self-confident in whatever they undertake.

Nevertheless, it has not been the best time for numerous young people to enter the labor market. The state has no means to create additional student places, labour demand is rapidly declining and the global economic crisis renders job seeking abroad also futile. Besides, surveys on economic cycles indicate that in difficult times the labour market risks primarily manifest themselves among the young and ethnic minorities. New labour market entrants have little or no work experience, they are offered jobs with lower qualifications and less pay. The economic crisis damages their outlooks even further (Bank of Estonia, 2009).

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Involvement of Entrepreneurs in the Teaching and Learning Process

Alena Ilavska, Jaroslava Kovacova

***Abstract* - Entrepreneurship refers to an individual's ability to turn ideas into action. It includes creativity, innovation and risk taking, as well as the ability to plan and manage projects in order to achieve objectives. This supports everyone in day-to-day life at home and in society, makes employees more aware of the context of their work and better able to seize opportunities, and provides a foundation for entrepreneurs establishing a social or commercial activity. [1]**

Nowadays it is generally known that processes of globalization and internationalization have modified the roles of main agents of social and economic changes. Regarding this universities are affected by new responsibilities - such as regional economic and social development, the reduction of public funds, and the educational market competence. In the quest for more and better ways of nurturing enterprising people and especially ways of developing entrepreneurs, the role of education and training is considered as a prerequisite.

In this context, this paper deals with a real link between enterprises, educational or training institutions and students, in order to allow students and companies to experience a mutual knowledge and to translate into practice the basic theoretical knowledge acquired during the training path.

The main contribution of this paper is to present the current situation regarding the environmental factors that affect the creation and development of the education for entrepreneurship in the EU and to bring a further insight on a good case practice related to a course offered by the Masaryk University called ´Professional practice´ aimed at replenishing knowledge from passed theoretical courses with practical experience.

I. INTRODUCTION

It is now generally accepted that universities are an important instrument in the facilitation of the contemporary knowledge – based economy. The labour market has become increasingly competitive with more skills and academic qualifications required for [1]employment in many sectors. As in other societies, young people entering the labour market are expected to be more flexible, polyvalent, adaptable to new situations, resourceful, and able to relate well to other people and other cultures, among other attributes.

While at Lehigh University at the beginning of the 20th Century, Herman Schneider (1872–1939), engineer, architect, and educator, concluded that the traditional classroom was insufficient for technical students. [2] Schneider observed that several of the more successful Lehigh graduates had worked to earn money before graduation. Gathering data through interviews of employers and graduates, he devised the framework for cooperative education .

A. Cooperative education [2]

Cooperative Education involves a productive work experience as a regular and integral part of a student's learning process. Cooperative education identifies benefits for students such as motivation, career clarity, enhanced employability, vocational maturity, for employers e.g. labor force flexibility, recruitment/retention of trained workers, input into curricula, as well as for educational institutions and society. [3] Beyond informal and anecdotal evidence, however, a familiar refrain in the literature is the lack of well-done research that could empirically demonstrate these benefits. Despite these problems, there is optimism about the future of cooperative education: social, economic, and historic forces are making cooperative education more relevant than ever, including emphasis on university-industry-government cooperation, a demanding workplace, new technology, the need for continuous on-the-job learning, globalization, and accountability. [4]

II. GOOD CASE PRACTISE FROM THE CZECH REPUBLIC

B. Masaryk University – Faculty of Economics and Administration [5]

The Faculty of Economics and Administration was founded on 1 January 1991 as the sixth faculty of Masaryk University. Since its establishment, the Faculty of Economics and Administration has developed into a prestigious site of learning. Presently, the faculty provides education for more than 3,800 students in all forms of studies and has been internationally renowned for the quality of its research.

In the field of education, science and research, the faculty does not act alone, isolated from the real world that surrounds it. On the contrary – the Faculty of Economics and Administration is determined to persistently cultivate relations and affiliations which connect the theoretical aspects of research with the environment of its application, thus with the real, "everyday" economy, the world of public administration, corporate sphere and other fields.

Consistent marketing management of the school is the key issue. It is necessary to follow the pace of the period and consider the future and perspective needs. It sounds easy, however a consistent pursuit of this goal is usually connected to considerable practical difficulties. One might even wish to paraphrase Ludwig von Mieses, a renowned economist, and say that *prediction of future is beyond the abilities of every mortal.*

The school management still tries to recognize the important trends and tendencies on the basis of which they could create an adequate and diversified offer that

Alena Ilavska is a teacher at Technical University in Zvolen T..M.Masaryka 24, 960 53 Zvolen, ilavska@ee-ducation.sk
Jaroslava Kovacova is the Chief State Counsellor, Ministry of Education of the Slovak Republic, Stromova 1, 813 30 Bratislava jaroslava.kovacova@minedu.sk

will be both attractive and could withstand competition. Though it may sound as a cliché, the first priority of the faculty remains a quality education. Quality can be perceived as the key to future success, a competitive advantage and a presupposition of future prosperity.

C. Professional practice – a new type of course implemented at the Faculty

Professional practice is the term used by progressive universities to encompass both the *Cooperative Education* and *Internship* types of experiences. As practical education has become more diversified and varied, the types of traditional undergraduate employment experiences have expanded significantly. However, a *Cooperative Education experience* in college is distinctly different from an internship.

Cooperative education [2] is a structured method of combining classroom-based education with practical work experience. A cooperative education experience provides academic credit for structured job experience. Cooperative education is taking on new importance in helping young people to make the school-to-work transition, service learning, and experiential learning initiatives.

This course is mainly focused on enriching the knowledge from so-far passed courses of the theoretical framework with practical experience concerning activities of organizations and institutions focusing on fields defined in the respective study programs that students go through at the faculty. It should increase the success of students in their transition to practice as well as their successful functioning in the job market.

Main objectives can be summarized as follows:

- to become familiar with discharge of offices, which they are prepared for in her/his study;
- to gain practical experience in the area conforming to the field of study;
- to find solutions to particular problems;
- to ensure the rise in the student's success regarding transition into the praxis and her/his exercise in the labor market.

The length of the course must be at least 3 weeks. It can be run continuously or on particular days within the semester, the exam period or during the holidays according to the conditions arranged between the faculty, company and student. The faculty is represented by the guarantor of the field of study (head of the department) or the guarantor of Professional practice.

Students can also perform the Professional practice in their current occupation, as far as this occupation corresponds with students' field of study. In this case, Professional practice must be approved by the guarantor in advance and a contract between the faculty, company and student must also be made.

Professional practice is recommended to be part of students' diploma work preparation in the particular company.

Performing Professional practice must not affect the participation of students in all other courses in the running semester.

The subject is concluded with a credit ranking. For obtaining the credit, students must hand in: The "Professional practise confirmation" filled in a due form with evaluation of an employee's, who has been in charge of the working experience on behalf of the organization. The final report about the working experience development and its results in the form of a seminar work, where the student summarizes the particular working experience contribution to his/her own personal development, assesses acquired findings in relation to the theory and makes a total reflection of the working experience. Daily notes about the working experience development as a part of the "Professional practice confirmation". One of the requirements for obtaining the credit is also students' participation in the last seminar, where they have to presents seminar works and fill in the questionnaires about the working experience (available on-line: www.econ.muni.cz/praxe). Part of the questionnaire after finishing the working experience as well as part of the final report is also recommendation of at least two topics for a bachelor or diploma thesis, which can be carried out in the organization where the Professional practice has been done.

D. Evaluation, analysis and students' attitudes [7]

Interrogation was made as a neccesary part of results of the subject Professional practice on Faculty of Economics. Questionnaires persistently shown that the majority of students realize that is necessary to develop own personal and professional premisses. As a suitable tool for mentioned need is complete Professional practice. Students evaluated its including to the sylabus very positive and the number of students involved to the Practice is increasing. Anyway it is important to continue constructive dialoque not only with a students but also with the partners.

The following charts show some of the most interesting findings gained from the interrogation:

The result from the info gathering through questionnaires is that students would appreciate extention of Proffesional practice to four weeks which could help to create better profesional and personal profile of students and to help them in competitivenes on labour market. Suprice was the result that students would prefer proffesional practice as obligatory subject.

1. Why did you decide to take part in the specialized course „Professional practise“?		
1.1 I would like to increase my Professional qualification	Persons	%
Definitely yes	34	62
More likely yes	18	33
More likely not	3	5
Definitely not	0	0
Total	55	100
I do not knot	2	4
Total	55	100

1.2 I would like to connect the Professional practise with my diploma work	Persons	%
Definitely yes	15	27
More likely yes	8	15
More likely not	24	44
Definitely not	6	11

1.3 I would like to be better prepared for entering the labor market after graduation	Persons	%
Definitely yes	43	78
More likely yes	12	22
More likely not	0	0
Definitely not	0	0
Total	55	100

1.4 I would like to verify my theoretical knowledge in the real life	Persons	%
Definitely yes	21	38
More likely yes	25	45
More likely not	7	13
Definitely not	0	0
I do not knot	2	4
Total	55	100

2. In frame of which studying program did you take part in the Professional practice?	Persons	%
Public ekonomy	31	56
Finance	17	31
Corporate ekonomy	2	4
Regional development	5	9
Total	55	100

3. What do you consider to be an optimal duration for the Professional practice?	Persons	%
2 weeks	2	4
4 weeks	17	31
6 weeks	6	11
8 weeks	4	7
One semester	17	31
One year	0	0
I do not knot	9	16
Total	55	100

4. Have you thought about staying at the *training company* after your graduation?	Persons	%
Definitely yes	14	25
More likely yes	14	25
More likely not	18	33
Definitely not	6	11
I am not sure, I do not know	3	5
Total	55	100

III. CONCLUSION

Masaryk University follows the Professional practice because it understands inevitability strong and at the same time very close cooperation between University and Industry. The partnership is based on curriculum constracted on a student practical training in enterprise and practical works made by professional staff from Industry which is main condition for preparation students for their future job and position.

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Entrepreneurship among Teaching, Learning and Action in the Context of the New Economy

Romita Iucu, Magdalena Platis, Oana Iucu

***Abstract* - The present environment changes the behaviors of all subjects: individuals, organizations, societies. In order to become active in a competitive market and to achieve a sustainable position in the industry, firms must be managed by people who believe and act entrepreneurial. Thus, the role of education is huge in giving to young generation not only the knowledge of entrepreneurship, but also the understanding of the entrepreneurial value and the possibilities of acting toward innovation, competitive advantage and capitalizing the opportunities.**

I. THE ENTREPRENEURIAL BEHAVIOR OF THE UNIVERSITY

The Entrepreneurial University is looking for the new, for the efficiency and for new organizational structures. The entrepreneurial action consists of changing on idea into an output needed by clients, respectively creating programs which are demanded by the students and/or the employer, both of them being easily considered as clients or receivers of education. Without students, the university or the study program can not be developed without loses. Through marketing activities, possibilities of attracting future students are identified, as well as future possible activities to be created.

The entrepreneurial organization takes into account in the selling process, three main aspects: selling methods, selling force and aggressive promoting. The same, the entrepreneurial university gets a proper behavior.

The entrepreneurial behavior of the university consists of a set of actions driven by autonomy, innovativeness, risk taking, proactiveness and competitive aggressiveness.

The Entrepreneurial behavior of the university may be observed at three levels:

a) The general level – which is the entire university behavior when it acts like an organization;
b) The internal level – which is the behavior of different individuals – professors, students and other employees who acts like entrepreneurs;
c) The external level – which is the behavior of the special departments or centers of the university in relation to the business environment.

A. Entrepreneurial behavior – general level

In the New Economy, Universities act or should act like entrepreneurial organizations in order to achieve success and continuity on the market.

The similarities between an organization and a university may be observed in the figure no. 1.

B. Entrepreneurial behavior – internal level

Many individuals start to act like entrepreneurs as members of the academic community. Here are some examples:

- A professor of law (Penal Law or Commercial Law) may be lawyer practicing as barrister or solicitor or attorney. He or she is involved in more trials for his/her academic experience being considered an expert compared to others, while, at the same time this professor is able to improve his teaching methods coming to class with many more practical examples or case studies. Therefore, the professor, the students, the clients are better-off from this behavior;
- A student may want to start a business of his/her own and follows the legal procedure to establish a company. Then, he may discover some lacks in his/her knowledge and ask for a debate during seminars when the student will graduate he/she will have already had some experience of running a business;
- An employee from the Accounting Department may act like a consulting accountant in his/her free time which means he/she will develop his/her skills and competences with many working hours and become a better accountant, too.

C. Entrepreneurial behavior – the external level

The universities which want to become successful on a long term being recognized as sustainable educational units must develop strong relationship with the business environment companies which might become future employer for the students and graduates. Thus, many universities develop special relationship with the business community by:

– getting the human resource involved in research projects with or for companies;
– establishing cooperation agreements with companies especially regarding the practical placements for students;
– involving in different networks with universities and companies;

In addition, some Universities create a special Department as a specific unit in the organizational structure for practical placement. Such a Department is very useful for all the actors involved – university, company and students and proves the entrepreneurial behavior of the modern university.

Romita Iucu - University of Bucharest, 36-46 M. Kogalniceanu Av., Bucharest, RO, iucu@unibuc.eu

Magdalena Platis - University of Bucharest, 36-46 M. Kogalniceanu Av., Bucharest, RO, magdalena.iordache-platis@drept.unibuc.ro

Oana Iucu - University of Bucharest, 36-46 M. Kogalniceanu Av., Bucharest, RO, oanaiucu@yahoo.com

Figure no. 1: The Organizational and University Behaviors

The Departement includes among its objectives:

- information, orientation and professional consulting;
- research on the graduates' insertion on the labor market;
- developing a data base for the alumni;

The relationship between university and companies can be classified into several levels of mutual involvement:

a) from the university point of view:
   - ➢ no university involvement; in this case, the students are those who are looking directly to be accepted for practical placement in companies using their personal connections or their individual capacity of introducing themselves;
   - ➢ medium university involvement; in this case, some companies continue to accept students for practical placement, but they have no restriction in refusing universities in case of facing some opportunities;
   - ➢ high university involvement; in this case, the Department already existed is establishing practical placement convention with companies and have a special preoccupation in distributing the students;

b) from the company point of view:
   - ➢ no company involvement; in this case the company does not reply or give a negative reply to universities regarding the practical placements for students;
   - ➢ medium company involvement; in this case, the companies accept students for the practical placement, but do not involve them in too many activities, and ignore them some time;
   - ➢ high company involvement; in this case, the companies not only accept students for practical placements, but they get them involved in several activities and select them for specific positions in certain departments according to their skills, even if they are not yet graduates.

Comparing the levels of involvement of the universities and companies, the entrepreneurial behavior may be observed, as in the figure no. 2.

Thus, no matter of the level of the company involvement, the entrepreneurial behavior of the University can be defined only when the higher institution is highly involved in developing such a relationship with the business community. Only a high involvement of the university makes it flexible, innovative, proactive, and risks taking which means entrepreneurial.

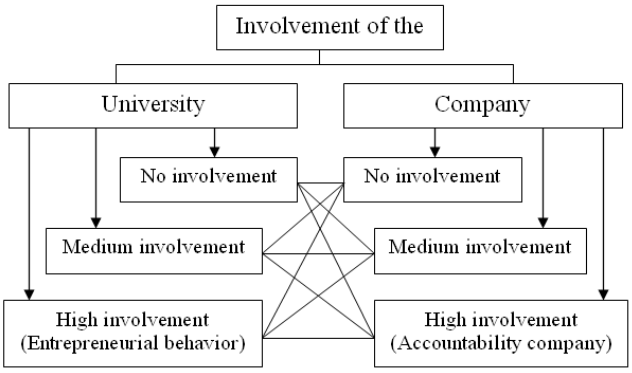

Figure no. 2: The Entrepreneurial Behavior of the University – The External Level

An entrepreneurial behavior is for the university what a "Customer Relationship Management" is for a company. Thus, the entrepreneurial university:

- – has the main objective not to run study programs but to obtain an additional client for the programs that already exist or may be created;
- – considers a student as a permanent client who may come to study as an adult at different study programs;
- – understands the double mutual dependent relationship:
  - university – students;
  - university – companies;
- – develops educational marketing activities;
- – understands that the client creates value for the university taking into account that the client gets a

set of knowledge, skills and competences that influence his/her behavior on the labor market;
- develops student-oriented activities which means that every student is well known regarding his/her abilities of learning and his/her propensity for different subjects;

Therefore, the modern universities have started to behave as entrepreneurial agents, but all the levels – general, internal, external – can be increased toward a sustainable position in the New Economy.

II. TEACHING AND LEARNING ENTREPRENEURSHIP; CORRELATIONS BETWEEN THEORY AND PRACTICE

Most of the universities have included in the curricula of their faculties Entrepreneurship as a compulsory or optional discipline. But only the entrepreneurial universities support the students to become entrepreneurial, through their own involvement toward increasing compatibility between academical training and practical training, between university environment and labor market.

Teaching Entrepreneurship is different from one faculty to another, at least from two considerations:

The fundamental study domain of the faculty. Teaching Entrepreneurship is different at the economic faculties, than technical, humanities, medical, arts etc. At the economic studies, teaching Entrepreneurship is already based on many other general subjects, such as Microeconomics, Small and Medium Enterprise Management, General Management, Marketing, Price and Market Mechanisms etc. At the non-economic studies, teaching Entrepreneurship must also include some basic elements of the business environment, such as competition, market, free initiative, price determination, types of business, risk management etc.

The teaching style. Each professors teach in a specific style which takes into consideration his/her personality, teaching method, evaluation system, and their own ability of teaching. Devoted professors who love their work have an extra-competence of teaching such as self-example and are able to transmit their knowledge much easier and with a much higher impact on the students' behavior. The strict professors who do not consider teaching as an art, but as a simple profession like many others, adopt a different teaching style which make their classes less attractive, and with less impact on the students' way of thinking and acting. Teaching Entrepreneurship in Universities follow one of the methods considered in the fig. no. 3.

Therefore, the entrepreneurial teaching style for Entrepreneurship means that:
- The professors consider each group of students as different team, having different motivation, different basic knowledge, different communication abilities, and different propensity to learn.
- The professor has only some basic concepts or principles according to which he/she may develop new ideas in class with the students' participations.
- The professor admit that the same lesson or teaching subject can be explained in different ways according to the students' interests, and get different satisfactions from the class interaction.
- Entrepreneurial teaching means that each class has its own:
- Autonomy → not all the students react in the same way, so one class is not dependent on another one.
- Innovativeness → each moment of teaching stimulates creativity of the individuals.
- Risk taking → sometimes, the expected reaction from the students is not got, so the professor has to change the question or the style to make them better concentrate.
- Proactiveness → all the ideas must be encouraged by the professor as long as they reflect positive thinking and sustainable development.
- Competitive aggressiveness → the teaching methods must be attractive to students, so they should come to class not because they have to, but because they like and want to especially in case of optional courses when they select one course out of few.

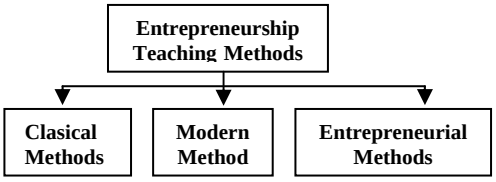

Figure no. 3: Entrepreneurship Teaching Methods

Classical Methods:
- knowledge is transmitted to students through lectures;
- students learn what they were told;
- discussions are focused on the transmitted ideas;

Modern Methods:
- knowledge is transmitted to students through lectures and case studies and individual work;
- students learn about concepts from real situations;
- discussions are focused on problems that deal with real organizations using problem-based problems or project/based problems;

Entrepreneurial Methods:
- knowledge is transmitted to students through lectures, case studies, individual work and team work;
- students learn about concepts from simulations or experiments, each class being different in the teaching style according to the students' involvement;
- discussions are focused on different integrative and complex situations that need interdisciplinary approach;

Learning Entrepreneurship needs the students to get a **set of competences** that are:
- General competences, generated by the context of the area of specialization.
- Specific competences – according to the discipline.

These kinds of competences include capacities and abilities such as in the figure no. 4.

Knowledge and understanding:
- understanding concepts like: entrepreneur, business, business life cycle, business ethics, business plan, business risk etc;

- understanding the role of the entrepreneurs in the market economy;
- knowledge of processes and activities needed for running a business;
- knowledge of business financing possibilities;

Explanations and interpretations:

- capacity of correlating Entrepreneurship with other disciplines in the business area;
- capacity of explaining the specific and general situation of a business;

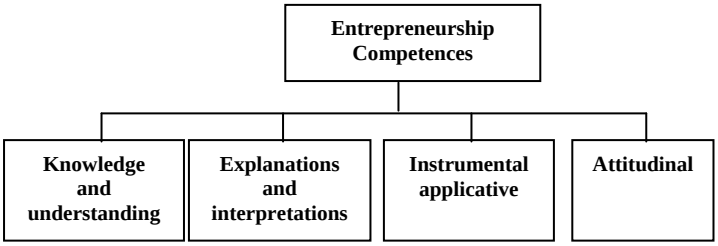

Figure no. 4: Competences for Entrepreneurship

Instrumental applicative:

- capacity of creating a business plan;
- capacity of using specific instruments such as added value, marketing plan, profitability, market share etc;
- capacity of working in team;

Attitudinal:

- capacity of implementing the new ideas into business;
- capacity of scientific support the importance of the entrepreneurship and of business administration;

Learning Entrepreneurship is dependent on the propensity for learning of each student. This includes:

– The ability of interaction with others – students know well themselves, learn from experience, and accept the others as they are when working in teams;
– The orientation toward results – students that get good grades and evaluations are able to motivate their colleagues to better perform and learn;
– The way of thinking – students stimulate their thinking being creative, imaginative in the complex environment and become able to understand the different ways of thinking of others;
– The openness to change – students who are curios, passioned of new ideas like to get involved in activities that stimulate their abilities;
– The learning history of the individual – students who learn fast are those who have been trained to learn since they were little, so that learning is part of their life and that means a lot of reading and looking for information.

The real facts prove that not always the best students who had achieved the best results get good positions on the labor market. In other words, the difference between teaching and learning on one side and action on the other side reveals the following aspects:

– Learning Entrepreneurship does not change the students or the graduates into entrepreneurs;
– High initiative may belong to individuals who may have not been ever trained on Entrepreneurship;
– Learning Entrepreneurship is an advantage for the individuals who want to become active in the real market.

The problem of being active on the market having the knowledge of entrepreneurship is a matter of activating the entrepreneurial "spirit". It is not genetic feature only of an individual; it is a process
that can be learned.

The entrepreneurial spirit can be easily recognized from the individual behavior, because he/she:

– Put an idea easily into action, have initiative.
– Accepts the risk in order to get profit.
– Identifies the market opportunities.
– Finds strategic solutions when other people become confused or contradictory.
– Is well organized and good resource administrator.
– Prefers the moderate risk being able to look for solutions and decisions that diminish it.
– Trusts in the capacity of success.
– Believes in future opportunities and personal development.
– Believes in luck meaning training + hard working + opportunity capitalizing.

III. CONCLUSIONS

- The Entrepreneurial University has a new type of management which understands and maintain the entrepreneurial culture;
- An university is entrepreneurial from three points of view (levels of the entrepreneurial behavior): entirely, as an institution; individually, as the employees become entrepreneurs; extensively, as the university develops the relationship with companies;
- An entrepreneurial behavior of the university's client oriented, either the client is the student, or the company;
- Teaching and learning Entrepreneurship create a competitive advantage for active individuals to become entrepreneurs;
- Activating the entrepreneurial spirit is not only a matter of individual capacity, but also a consequence of the system of education;
- Teaching methods can be customized in the sense of entrepreneurial style, so that each lesson can be flexible and fully adapted to the students;
- In the context of the New Economy, people and organizations must behave entrepreneurially in order to get successful and sustainable outcomes.

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Academic staff involvement as mediator in the professional integration of students

Alain Jungman, Marie-Lise Micheli, Marie Ruiz, Kristine Jurski

***Abstract*—The objective of this paper is to emphasize the role of the academic team in the process of students' integration in professional careers as compared to the role played by the CDO. To face the increasing difficulty for students to find a job the CDO is becoming a key element offering numerous specific services and resources. Among them, and to answer the growing industrial need for international job experiences, most career offices in higher education have developed international opportunities in order to improve students' job-finding. International career training is getting more important in CDO activities and requires a considerable investment from different actors. On the whole, the academic team plays a pivotal role between the students, the enterprises and the university. The constraints are not only practical and material but also psychological. Examples of the role played by the academic staff, as « local mediator » between the students, the university and the enterprises will be presented by focusing our attention on European placements as a preparation to international careers.**

I. INTRODUCTION

The Careers Development Office (CDO) in France mainly has two functions: on the one hand, they offer careers advice and guidance to help students choose an academic program or a degree at university and, on the other hand, they give the students and alumni information on job opportunities and the labour market. The careers advising staff is made up of information officers and psychologists who can give support to professors and students by searching documentation on enterprises, proposing training courses on 'how to get a job', organizing meetings with professionals or human resources managers from companies. But, in most cases, they have no direct influence on the pedagogical, administrative and financial relationships between the universities and the companies. In fact they are more "intermediary" than mediator as they provide information, documentation and advice. The CDO contributes to the cooperative process with the professional world by contacting job centres and enquiring after the professional future of graduates.

Among the numerous activities of the CDO, one has developed very quickly in the recent past. In the frame of university-enterprises cooperation, a new way of collaboration has arisen in the field of students' international placements. To face the increasing difficulty for students to get a job, especially a first job, and to satisfy the growing need of firms for international job experiences, careers officers, in partnership with motivated academic staff in higher education, have developed international opportunities to improve students' employment and to enhance their integration in the labour market. As an international background in higher education has become more and more valuable for job finding, we shall focus our attention on the factors and the actors which play a determinant role in the success of this approach.

To develop foreign activities, different partners act together at university: CDOs, teachers, students, international relations offices, each one playing its part as mediator between universities and foreign enterprises. The success of the Erasmus program highlights this new challenge where the constraints are not only practical but also psychological. Hence, a close connection between the curriculum, the student and the industrial field is required.

As a consequence, the initiative and the synergy of the project is preferably conducted and mastered by academic staff who assumes a pivotal role between students, enterprises and university.

Example of the responsability took on by the academic staff as 'local mediator' in the process of the professionalization of students shall be presented by putting the emphasis on European placements as valuable job-finding assets on the C.V. and a determinant preparation to future international careers.

In a first part, we shall take into account the main missions of the CDO in European universities compared to our local experience. In a second part, we shall emphasize the determinant role of the teaching staff as mediators in the professional integration of students. The third part shall be devoted to the pedagogical aspects of the project and the psychological impact necessary to comprehend the international culture and make the experience a success. We will show that the most determinant features are the energy invested to motivate the students, the specific training to prepare them to the double culture gap in the working world and in the foreign corporate culture, and the coaching during the placement period. Finally, we shall present the administrative and financial organization of such an international approach.

II. CAREER DEVELOPMENT OFFICES IN EUROPEAN UNIVERSITIES AND IN FRANCE

A. The challenge of the CDO

Most universities in Europe offer the services of an office to facilitate students' job-finding. This so-called Career Development Office (CDO) generally includes:

- career advisers/individual counselling
- job/internship resource centre
- postgraduate study orientation
- university-enterprise meeting
- projects or programs funding

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A. Jungman is with the Institute of Technology of the University Paris Diderot-Paris 7, 2 place Jussieu (case 7139) 75005 Paris, France (tel: +(33)(0)-157277990; fax: +(33)(0)-157277991; e-mail: alain.jungman@univ-paris-didert.fr)

M.L. Micheli is with the Continuing Education Office of the University of Paris Diderot-Paris 7, 2 place Jussieu (case 7139) 75005 Paris, France.

M. Ruiz is with the Institute of Technology of the University Paris Diderot-Paris 7, 2 place Jussieu (case 7139) 75005 Paris, France

K. Jurski is with the Institute of Technology of the University Paris Diderot-Paris7, 2 place Jussieu (case 7139) 75005 Paris, France

- seminars and workshops on
  - CVs and cover letters
  - self employment and freelancing
  - international culture

One of the most important challenges for a top university is to adapt all these services to the needs of each department, from social sciences to physical measurements, from law to medicine or linguistics. Not only may the basic approach differ significantly from one degree to the other, but also the type of interview, the format of the cover letter, the network of industrials, the objective of the curriculum, the constraints of the topic (technical, commercial, industrial…). For these reasons, the CDO is more like a resource centre than an actual office offering personal help which would fit the requirements of each individual student.

B. The CDO: the French approach

The situation is significantly different at the University of Paris Diderot-Paris 7, as no such CDO exists. Instead, there are several offices to help the students:

- The *Service Commun Universitaire d'Information et d'Orientation Professionnelle* (SCIUOP): offers advice and resources to help the student's orientation during his/her studies. The advising staff is made up of information officers and psychologists who can give support to professors and students by searching documentation on further studies and on enterprises.
- The *Office of International Affairs (Bureau des Relations Internationales: BRI)* manages the international mobility programs and international agreements.
- The *Unit for Coordination University-Enterprise* organizes meetings with professionals, manages research agreements with industrials and takes inventory of industrial contacts from the different university departments.

This situation is the result of a historical situation common to the oldest and top French universities. Until recently, it was commonly accepted that the role of the university was limited to producing and transmitting knowledge. However, the fast technical evolution, the strong competition in the industrial and business world and the emergence of a new population with different backgrounds in the university, has confronted the world of education with new missions. As a result, the universities were pushed to add professional curriculum to their traditional roles in order to respond to the industrial employers' demand for professional skills.

As a consequence, because of the dispersion of the services and the lack of concrete and specific actions for students' integration in the industrial word, most university departments which are concerned with students' careers have had to work on finding solutions for their students' job integration. To implement a successful job-hunt scheme they have started organizing courses, seminars and workshops so that the student gains in competitiveness. They have also established connections with employers and built international networks with foreign universities and companies.

III. The Role of the academic team

In this configuration, the only role left to the University through its different offices mentioned above (i.e. The *Main central administration office*, *The Office of International Affairs*, The *Unit for Coordination University-Entreprise)* is to:

- provide information, documentations and advice,
- enquire after the results of each department actions in order to set up a data base for further use
- check the legality of agreements, documents and facts such as insurance, compatibility with the curriculum, financial involvement
- collect any financial support or grant from local, national and international institutions and transfer them to the students

To face this new challenge, many departments have settled a task-force which aim is to play the CDO's role at the department level. The major advantage is that this service is strongly adapted to the degree and to the student. The directory of companies for internships and careers, the training for interviews, the international networks of industries and universities are closely related to the degree. The organization of placement can fit the calendar of the specific program as well as the topic can fit the curriculum. The CV and cover letters can be adjusted in accordance with a specific student. The disadvantage is that this time-consuming task has to be supported by members of the academic team.

A. An individualized help

The mission of the local academic team is then to take an active part in helping students understand and managing the delicate balance of honouring academic interests and focusing on realistic career goals. Beside their teaching activities the professors are dedicated to empowering students with employment and self-knowledge, enabling them to transfer a general higher education into the professional world. Because the academic staff knows each student, their help is strongly individualized.

Motivated professors provide each student with individualized attention and guidance in their job search and give them the tools necessary to maximize their employment opportunities. They try to develop and maintain relationships with local, regional, and national employers to increase their interest in hiring their students.

At our Institute of Technology (University Paris Diderot-Paris7) for instance, we offer the students jobs and internship opportunities; we propose more placements abroad than the students can take, all of them with grant supports; we help them to fill the numerous administrative forms; we train them to write resumes and cover letters, and to have interviews; we orientate them to post-graduation opportunities; we inform them and advise them about recruiting events. On demand, the students as well as the alumni can be e-mailed job offers which are collected in our department through industrial relationships.

B. A strong involvement

But for those of the academic team who take part to this scheme, a considerable personal involvement, a specific knowledge and a strong motivation are required. They have to establish connections with industrials, they have to meet regularly with the students, they have to follow their individual approach, they have to interact with the different offices of the University mentioned above. They play a crucial role as mediators between the student, the company and the university.

IV. INTERNATIONAL EXPERIENCE

Among the numerous resources and services which are offered to the students by the university to enhance job-finding prospects, international career training is getting more and more determinant. It provides students with a once-in-a-lifetime opportunity to gain international experience in their field of study, learn new cultures, and hence, be prepared to international job opportunities in order to improve their job-finding opportunities. The growing globalization of the economy as well as the development of the European Union makes it necessary to include the international dimension to the system of education, not only from a cultural point of view but also in a practical approach.

In this context, a considerable effort has been made in our department to develop foreign internships. This year, 27% of our students are completing their mandatory internships abroad as compared to 8% in 2008 which amounts to a rise in 237%. This result is not only due to the change of the student's mentality, but much more thanks to the effort of a few academic staff. The mission for the academic tutor is of twofold: 1) find companies, research laboratories or universities abroad which agree to supervise our students' internships; 2) convince the students that it is a very relevant approach for their professional future. Therefore, the tutor's mission is to identify, find and settle internships.

A. A challenge for the academic tutor

1) Prospecting, finding and settling internships abroad

The first step is to find the company or the institution likely to hire a student for an internship in the given field of study during the given period. This is achieved through internet, telephone and personal relations network (research or meeting connections, for instance). The second step is to look carefully at the topic, the scientific environment and the location for lodging and public transportation. This is done through a visit to the future professional tutor by the academic tutor who supervises the student. This is also the occasion to sign the agreements and to introduce the outcome of the training period. The third step is to find the adequate financial support (national grants or funding from the EU the county or the city-council).

2) Convince the student

Another effort, and not the least, consists in convincing the student (i.e. as well as the parents) that it is the right choice, without much risk. The strategy is based on a long psychological preparation through meetings with alumni with international experience. For an internship at the end of the second year of study, meetings are organized as early as mid-first year.

To give confidence to worried students who will have to make their first time experience together in a company and in a foreign culture, a pedagogical, linguistics and cultural preparation is arranged. It includes workshops about cultural differences [1], [2] at work, in the street, in the private life, for administrative procedure… . In addition, further English lessons are offered at lunchtime or after the class. Documents about the company, the city, the transportations are given. Personal assistance from the tutor is given to look for lodgings.

B. A heavy, time-consuming responsibility

During the placement, the academic tutor liaises with the student through the internet. He/She intervenes in case of problem. He/She makes one mandatory visit on the site during the placement. He/She is part of the jury with the professional tutor during the final oral presentation assessment, in the sending university if the industrial tutor is willing to visit. Otherwise, he/she has to go to the foreign country.

During his/her presentation the student has not only to speak about the scientific part of his/her internship, but also to present the particular features of his/her foreign experience.

C. A financial effort

All these approaches to encourage, promote and develop the international professional training of the student have a cost which has to be taken in account. The financial effort comes both from the student and from the institutions. All of our students who go abroad get a grant from the UE, the county, or the city-council. The amount depends on the parents' income. Some very lucky interns receive a salary from their employer. But, in most cases, the amount they get does not cover all the expenses. As a result, the less well-off students who often have a more limited experience abroad are less willing to travel.

The financial support must also include the mobility of the academic tutor and the time he/she spends organizing the international placements.

V. CONCLUSION

The CDO has become an essential tool to help the student in his/her professional integration. In this paper we have raised the question of the relevance of a large multifunction office at the level of the university or a participation of the academic team of each department involved in all these tasks. The compromise could be to have, on one side, the CDO for general documentation, seminar organization, recruiting fairs, individual counselling by psychologists and, on the other side, a personalized follow-up of the student in all the professional effort, including a strong international background.

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Enhancing Entrepreneurship, Competitiveness and Innovation of SMEs through Synergic Cooperation of European Networks

Simona Lache

***Abstract*— Starting from the Pan European network based model proposed by EUE-Net to address especially the needs of small business sector, this paper identifies the common aims sharing by different European networks and proposes a cooperation model for a larger audience and efficiency. It refers specifically to the Europe Enterprise Network, launched by EC – DG Enterprise, which is presented through one if its regional partners – BISNet. The added value would be related to the presence of universities as contact points and knowledge counterparts for SMEs, able to offer services for enterprises through another prospective as the "traditional" service providers (chambers of commerce, associations of entrepreneurs, etc.).**

I. Introduction

The idea of U-E cooperation has been successfully transformed into a dialog platform involving universities, SMEs and large enterprises, associations of entrepreneurs from almost all European countries. Since 2004, when the first European University-Industry Network was developed (as a result of a Erasmus project), several issues of common interests between actors have been discussed, debates have been carried on and finalized with models of U-E cooperation on different areas: tuning the academic curriculum according to the labour market needs, practical placement of students, synergy in scientific research, European database for graduates and employers based on local/ national Carrier Development Offices.

One of the important issues that came out through the EUE-Net debates is related to SMEs and their important role for the development of the European economy, described simply by some facts and figures [1]: 98% of all enterprises in Europe are craft and small enterprises; they employ 40-45% of the workers in private sector of the Member States; they have a share in turnover of the private sector of 25-55%; their share in deliveries to the other Member States and exports to the third countries is equivalent to some 10-20%; approx. 80% of their activity is offered at local or regional level. Due to the new challenges the craft and small enterprises are subjected nowadays, ones the enlargement of the EU (modernizing of production and services for the new members states, facing increasing competition for the old member states) – the universities may play an important role in the society as knowledge counterparts for SMEs.

In this respect, EUE-Net has launched the networking principle – a Pan European network based model to address especially the needs of small business sector; up to now a strategy and tools for enhancing employability and entrepreneurship at European level has been developed, by: enhancing the Quality of practical placements of students, by development of a quality standard for quality of practical placement in enterprises; development and networking at European level the University entities having as natural vocation the link between University and Enterprise: Network of Career Development Offices; tuning Entrepreneurship - defining generic entrepreneurial skills for the students and best profile of teachers in order to enhance the entrepreneurial approach within the University sector; increasing the presence of the entrepreneurs within the University activities by design, experiment and promotion of appropriate innovative mobility schemes involving entrepreneurs.

While DG Education and Culture of the EC supports cooperation between Universities and Enterprises through Erasmus projects, at the level of DG Enterprise has been launched in 2008 the Enterprise Europe Network - EEN, "the largest network of contact points providing information and advice to EU companies on EU matters, in particular small and medium enterprises (SMEs)". Based on the former Innovation Relay Centres and Euro Info Centres, EEN aims to give support to small and medium companies on a very wide range of subjects. What it should be emphasized is that while the old centres were developed mainly around Chambers of Commerce or other institutions having exclusively a business orientation, the recent set-up EEN includes universities as well, which gives an important signal to the business community about the role universities play nowadays in achieving the European goals related to "grows" and "jobs". This idea, raised in EUE-Net some years ago, may flourish and turn into the "network of networks", if the two networks would be bounded in a synergic cooperation, sharing common goals related to enhancing employability and entrepreneurship, raising innovation, competitiveness and regional excellence.

II. BISNet Transylvania, partner of EEN

A. General Description

The Enterprise Europe Network is present in more than 40 countries, with around 3 000 experienced staff in 600 local partner organizations providing expert advice and services to EU businesses [2]. It acts on regional bases, for

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Simona Lache is with the Department of Precision Mechanics and Mechatronics, Transilvania University of Brasov, Romania (e-mail slache@unitbv.ro). She was the first coordinator of the Department of Links between University and the Socio-Economic Environment (2005-2008) and since 2008 is vice-rector of Transilvania University of Brasov.

example in Romania there are four EEN networks, addressing the SMEs needs located in specific regions. The BISNet Transylvania Consortium is one of these regional networks, offering support and services for enterprises in Centre and North-Western part of the country (macro-region 1, Fig. 1).

Fig. 1. Division of Romania in regions/ macro-regions of development. [3]

It is structured on 3 pillars, relevant for the geographical area mentioned above [3]:

- **Regional development agencies**: Regional Development Agency North-West (ADR NORD-VEST), Regional Development Agency Centre (ADR CENTRU);
- **Universities and research bodies** with RTD, Innovation and technology transfer support structures: Technical University of Cluj-Napoca, Transilvania University of Brasov, National Institute of Research & Development of Optoelectronics -Technology Transfer Centre CENTI, The National R&D Institute for Electrical Engineering - Business and Technological incubator;
- **Financial institutions**, with a strategic focus on SMEs: Transilvania Bank- Banca Transilvania.

B. BISNet objectives

The general objective of the project is to increase competitiveness and innovation capacity of the European Union, efficiently meeting SMEs and other actors needs by providing integrated business and innovation services as defined at present time and developed within the 6 years time-horizon by the new European network, in RO1 geographical area, through the proposed consortium as network partner.

Integration of services comprises local, regional and European network available services, irrespective of participation in the present consortium, ensuring the "no-wrong door" objective. In the context of 6 years time horizon, the specific objective of the present project is that the new European network RO1 partners will be recognized by the majority of SMEs in RO1 as a "first to ask" provider of business and innovation support services. The present project is, also, aimed at making easy accessible and ensuring geographical proximity, of the proposed services, to the management and operational structures of the SMEs and other targeted actors, by using state-of-the art development and delivery of services technologies and know-how, continuously updated according to technological developments which might occur during the 6 years implementation time-horizon of the present strategy and following the common European network tools and resources development.

To increase quality and professionalism of the integrated services the new network provides by:

- incorporating the methodologies, tools and know-how of the new European network into the current operations of the consortium and into the local business and innovation support services providers with whom the network partner will co-operate;
- promoting well tested in Romania best practices to the new European network and contributing, methodologically and with present or future know-how resources, developed by the consortium partners or available from local co-operation partnerships, to the success and improvement of quality and adequacy of services provided by the European network;
- disseminating information to and encouraging Romanian business support services providers to test and adopt European best practices into their operation for achieving service quality and deliverables compatible with the highest European services standards.

The activity is structured on four modules, according to CIP (***C****ompetitiveness and* ***I****nnovation Framework* ***P****rogramme*) regulations:

a) Information, Feedback, Business Cooperation and Internationalisation services.
b) Services for innovation and for the transfer of both Technology and Knowledge.
c) Services encouraging the participation of SMEs in the Community framework.

According to module a) the competitiveness of SMEs and large companies can be enhanced or planning to develop business in the regional sector where the network act, in synergy with all relevant national, regional and local actors, public and private. All these can be achieved by:

– providing high quality, accessible, accurate and available on demand information services about the European Union, particularly about its legislation, programmes and opportunities;
– providing highly professionalized, structured, and relevant business related information about Romania and the Internal Market;
– promoting the involvement of SMEs in EC policy life-cycle, with a special focus on the policy-making process;
– supporting SMEs for developing cross-border activities and developing international business;
– providing effective and on-time assistance for finding relevant partners from public and private sectors.

The objective of according to module b) is to increase innovation capacity and competitiveness of European businesses and innovation actors by:

– providing high quality innovation, technology and knowledge transfer services, especially to European SMEs;
– effective and efficient brokerage services for bringing innovative products and services developed by SMEs,

large companies, R&D organizations, universities and inventors to the Internal and international market;
- widely disseminating relevant, structured accurate and accessible information about European Union;
- innovation related policies, legislation and support programmes;
- actively supporting dissemination of research results inward and outward the region where the network acts;
- offering highly specialized innovation support services directly or by linking beneficiaries to relevant local, regional, national and European providers.

According to module c) the Europe Enterprise Network may contribute to increase participation of SMEs in the Community Framework Programme for RTD by:
- raising their awareness about the opportunities provided by the European Union through the Community Framework Programme for RTD ;
- providing reliable services according to client particular needs for finding relevant partners for successfully develop and implement research and development projects;
- delivering adequate know-how transfer services for project proposals preparation and coordination.

C. Relevance on target groups

The services and activities carried on within the BISNet are relevant for addressing the shortcomings manifest within the SMEs sector, identified within national and regional policy-making processes, as follows:
- poor knowledge regarding the opportunities provided by the Internal Market and the European Union policies and programmes;
- low involvement in policy making process, regional, national or at EU level;
- low investments in human resources and RDI;
- not systematic innovative actions;
- low interest for innovation commercialization;
- out of date technologies still widely used.

For example, the sector of SMEs in the RO1 area is the most in need of business development and co-operation opportunities as well as innovative technological solutions but with the lowest capacity of mobilizing resources, especially in terms of information and financing. Thus the present proposal services and activities provide a high proportion of the needed support.

III. METHODOLOGY OF BISNET

A. Methods of implementation

Considering the services and activities provided by the network, the implementation methods combine, in a coherent and balanced way, the communication/ information methods with training/ consultancy methods.

Communication/information methods are considered base upon the 2-way communication model with an emphasis on:
- exhaustive, logically structured and action generating messages being transmitted to the target groups;
- feedback on the received message, the actions generated by the message and the impact of the communication channel by which the message was delivered.

The communication/ information methods are used for generating a dialogue between the network partners and the target groups, being applied using all traditional channels available – mass media, group discourse/ presentation, discussions; they also emphasize Internet media communication, taking advantage of the opportunities created by web technologies (personalized web pages, online delivery of presentations - webinars, online call and assistance centre, personalized emailing content, online forum, etc).

A regularly impact assessment on the effectiveness of the information/ communication methods, technologies and milestones is carried-out during the implementation of the communication and marketing plan, with fine-tuning actions that will be taken in terms of messages content, delivery channels mix and communication activities.

Training/consultancy methods follow a balanced approach between expert presentations, best practices dissemination approach and participatory to the learning / problem-solving process approach, based on relevant and personalized case-studies for the target group, on-the job learning, operational knowledge and skill development. As for the case of communication/ information methods, the quality of the messages transmitted through training/ consultancy are strictly observed and collected feed-back is timely incorporated into the services workflows.

Innovative support technologies are considered when applying these methods by implementing business processes oriented IT support systems.

B. Expected results

The proposed project implementation is expected to develop, within an European context, several activities carried-out by the consortium partners, jointly or individually, such as:
- providing business support services to SMEs;
- involving regional SMEs in the policy-making process, not only at regional level but also at European level;
- informing the SMEs regarding the financing opportunities offered by EC, especially about measures planned under the priority axis devoted to the increase of SMEs competitiveness and innovation capacities;
- providing business internationalisation as well as trans-national technology and know-how transfer support services;
- increasing quality and effectiveness of business information services.

IV. IMPLEMENTATION OF MAIN CONCEPTS AND ACTIVITIES

Main concepts identified by the consortium for implementation are:
- the “no wrong door” / integrated services for SMEs: implementation of the concept is ensured firstly, by covering all services grouped according to the module a). In addition, the consortium commit itself, for the 6 years time-horizon, to operate and continuously work as member of the European network and develop services high-quality platform, tools and

methodologies. Each partner member in the consortium will present to the SMEs the same set of services. The same set of services will be presented, also, through local/regional co-operation partners of the consortium. The integration principle will be followed and implemented at work procedures, workflows and consortium support IT platform levels;

- the excellence and professionalism concept: implementation of the concept is and will be achieved by the commitment of the partners to implement of both the European network quality standards and best practices and their best knowledge and know-how;
- the European dimension of the network and single network concept: the consortium commit itself to promote and deliver the services of the new network by emphasizing its European specificity and identity;
- the network brand: the consortium commit itself to use the network brand and specific identity features provided by the European Commission;
- proximity and accessibility: the consortium commit itself to ensure proximity and accessibility by delivering services in a non-discriminatory way to all target groups mentioned in the present proposal at specified partners premises, on client site and on the Internet; accessibility of the network services will be continuously improved by establishing cooperation with other relevant service providers present in the region, which are not formal network partners, such as public bodies, central, local administrative bodies, professional associations, sectoral technology transfer and technology information centres, business incubators and parks, national networks, universities, National Contact Points – NCPs;
- partners roles clearly defined: the consortium implements this concept through internal management and operation agreements and conclusion of sign-posting and co-operation agreements with service providers which are not members of the consortium.

Following the above mentioned principles, the following benefits can be achieved: from the client point of view - ensure constant and verifiable quality of service being delivered, traceability of the activities, non-duplication of efforts for a specific client, personalized services according to client needs; from the consortium and local co-operation partners point of view - ensure rational organisation of service delivery, non-duplication of activities, cost-effectiveness of the services and complete operational integration.

The proposed implementation approach also provides flexibility and easy adjustment of the consortium operations to the standards and procedures that will be set-up by the Executive Agency for Competitiveness and Innovation (EACI), which ensures common resources, tools and platform of the new European network. Overall implementation approach within the framework of the present strategy and the European network BISNet integrates business and innovation support services:

- available to network clients at Romanian local, regional according to signposting agreements to be concluded by the consortium during the network lifetime;
- available at European level as a result of the new European network set-up as well as following agreements concluded by the new European network with other support services networks or international organizations;

Co-operation and signposting agreements are to be concluded with bodies selected from the following main categories:

- public bodies at central level such as: Ministry of Economy and Finance, Ministry for SMEs, Trade, Tourism and Liberal Professions, Ministry of Education and Research, National Authority for Scientific Research, National University Research Council, Managerial Agency for Scientific Research, Innovation and Technological Transfer, National Agency for Partnership with Business Community;
- other relevant national bodies, such as: Romanian Association for Standardization; State Office for Inventions and Trade Marks; Romanian Office for Copyright; Romanian Accreditation Association;
- County Councils in each county; City Halls; Local Offices of Ministry for SMEs, Trade, Tourism and Liberal Professions covering NUTS II level (County Offices); County Chambers of Commerce and Industry; Professional associations; Entrepreneurs associations (National Council of Romanian private SMES); Financial Institutions (banks, credit guarantee funds);
- RTD and Innovation relevant actors such as: Universities, Technology transfer and technology information centres, Business incubators and technological parks, consulting companies, National Network for Innovation and Technological Transfer, Romanian Association for Technological Transfer; Public and private Research Institutes; Patent lawyers; National Contact Points – NCPs of the 7th FP.

V. Conclusion

The Pan European network based model proposed by EUE-Net to address especially the needs of small business sector could have a larger audience and efficiency if efforts are joining to other European networks, sharing the same aims. Europe Enterprise Network is representative in this field. Launched by EC – DG Enterprise, it is presented in this paper through one if its regional partners – BISNet, as potential cooperation model with EUE-Net. Its methodology and instruments for stimulating competitiveness and innovation of SMEs could be combined in a synergetic way with the ones developed within EUE-Net. The added value would be related to the presence of universities as contact points and knowledge counterparts for SMEs, able to offer services for enterprises through another prospective as the "traditional" service providers (chambers of commerce, associations of entrepreneurs, etc.).

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What is Innobasque?

Carlos Ochoa Laburu

I. Innobasque Project (www.innobasque.com)

Innobasque, the Basque Innovation Agency, is a private, not-for-profit association set up to coordinate and promote innovation throughout the Basque Country and to encourage the entrepreneurial spirit and creativity at all levels.

Innobasque comprises players from the Basque Science, Technology & Innovation network, private business, the regional and local authorities and representatives from the region's business federations and workers' organizations and a broad spectrum of innovation-related organizations.
Besides offering players a powerful platform and cooperation network, Innobasque will also be acting as a channel for activities designed to promote values and attitudes associated with innovation in Basque society. It will concentrate in particular on the kind of initiatives capable of promoting the image of the Basque Country as a hub for innovation and an advanced R&D (+I) centre. Such measures will also publicize the work done by the movers and shakers that help to get innovation moving in Basque companies and organisations.

II. Mission and Goals

A. Vision and Mission

The Innobasque vision is to turn the Basque Country into the European innovation benchmark. To this end, it is to implement a demanding short-, medium- and long-term transformation programme.
Innobasque seeks to stimulate and promote technological and non-technological innovation in the Basque Country by encouraging the business spirit and creativity. In particular, it will focus on improving competitiveness in Basque organizations and in the primary, secondary and tertiary sectors of the economy, while also raising present and future living standards in the region.

B. Goals

Innobasque's main goal is to lead the campaign to transform the Basque Country into a total innovation society and make it the European benchmark for innovation-related issues.
To begin with, Innobasque will also be working to:

- Promote innovation- and entrepreneurial-linked values and attitudes exhaustively throughout Basque society.
- Help generate an "innovation momentum" in all regional organisations.
- Be an indispensable tool in coordinating, promoting, monitoring and evaluating the Basque Innovation and Entrepreneurship System.
- Help give the Basque Innovation and Entrepreneurship System a high international profile.
- Promote the image of the Basque Country as Europe's innovation hub.
- Be an essential forum for debate, analysis, study and research into future trends in innovation.
- Propose any action that will enable players in the Basque innovation and entrepreneurship system to respond to strategic challenges as they arise.
- Implement any activities deemed appropriate or useful in forwarding the cause of innovation in the Basque Country.

III. Sphere of action

a) Technological innovation

The Basque Country has made a considerable effort in R&D over the last two decades, in which time it has managed to consolidate an advanced innovation system that is, in many respects, a world benchmark.

b) Social innovation

Innovation is the key ingredient of the Basque competitive model for the coming years. The aim is to create an innovative society in which people in all walks of life experience the values associated with innovation and change their behaviour and attitudes accordingly.

c) Basque innovation system to expand internationally

Today the most innovative territories attract wealth and talent and, ultimately, create wellbeing for the whole of society; the relationship between territory, innovation and competitiveness is clear. Disseminating specific values and capacities associated with innovation can generate considerable benefits for a particular territory.

d) Business transformation

Today we live in a new economic era of globalization, ferocious competition, an increasingly complex environment, technological progress and far-reaching changes in customer demand and political and economic structures. This situation has greatly affected the way business is understood and the ways in which companies and organisations operate.

e) Entrepreneurship

The Scheme for Business Competitiveness and Social Innovation 2006-2009 presents the key factors in the entrepreneurial promotion model for the Basque Country.

f) Promotion and comunication

Innobasque has an important role in urging the implementation of initiatives designed to raise awareness and to spread and promote innovation-related values, the final goal being a Basque society that is innovative in all walks of life.

IV. The Innobasque Network

The Innobasque Network is formed by different knots that contribute to a common goal, to convert the Basque Country (Euskadi) into an innovative society in all environments, shaping the civil society and establishing the maximal collaboration between public and private sectors. The first ring of the Network is composed by the **Innobasque Team** (organizad in seven Operational Areas and a satff unit), the **Managing Bodies** (managing Board and Area Executive Councils and the **Partners** being the **i- Talde** one of the main participation and ideas generation tools.
The second ring is the **Basque Alliance for the Innovation** that encompasses all the agreements and alliances between the different agents in the Network
The third ring is the Innovators Community that include all people envolved with innovation and change that are going to mobilize to reach the social deployment needed to transform the Basque Country into an European reference in innovation.

In 2008, Innovation Year in the Basque Country:
1. We were joined by **450 agents**, of whom **335 were events organisers**, **83 were collaborators** in a course or conference, and **32** undertook to spread news of the Innovation Year.
2. The number of actions programmed and implemented in 2008 came to **2,018**
3. No. of attendees registered: **141,703**

V. Entrepreneurship

The Business Competitiveness and Social Innovation Plan 2006-2009 puts forward the key elements of the model for promoting entrepreneurial activities in Euskadi: placing emphasis on creating a **culture of enterprise**, energizing and boosting **interconnectivity between businesses and the main agents who generate business ideas;** and **developing the full potential of existing infrastructures so that they plug existing gaps in the sphere of seed capital, business angels,**, etc.

1013 - Partners -

PARTNER TYPE	**Nº**	**%**
Agentes Científicos-Tecnológicos y Organizaciones sin ánimo de lucro	195	19,2
- Agentes Científico-Tecnológicos	110	10,9
- Organizaciones sin Ánimo de Lucro	86	8,5
Empresas, Entes Públicos de Derecho Privado y Asociaciones	727	71,8
- Empresas	513	50,6
- Consultorías e ingenierías	155	15,3
- Servicios financieros	12	1,2
- Asociaciones Empresariales, Clusters, etc	47	4,6
Instituciones Públicas	37	3,7
- Gobierno Vasco	5	0,5
- Diputaciones Forales	3	0,3
- Ayuntamientos	29	2,9
Organismos público-privados	48	4,7
Representantes Institucionales de Empresarios y Trabajadores	5	0,5
- Patronales	4	0,4
- Organizaciones Sindicales	1	0,1
Asociados Honorarios	1	0,1
TOTAL	**1.013 --------- 100%**	

As the Plan, highlights, it's a process of **getting a long-term cultural change under way and, in the medium term, deploying the full potential of infrastructures and instruments so as to respond effectively to each and every need of enterprising people living in Euskadi, thus not only giving rise to business start-ups but also helping to consolidate them and assist their growth.**

Since, as has been shown, the sphere of Entrepreneurship has a direct bearing on Innobasque's other fields of action (technological innovation, social innovation, business transformation and internationalization), we wanted to place special emphasis on all activities aimed specifically at this priority target, in order to strengthen co-ordination and facilitate a two-way dialogue with public and private agents whose activity is centred around the figure of the entrepreneur, and with entrepreneurs themselves.

The axis which is receiving most attention, or, to put it another way, the **Strategic Approach** for the Advanced Entrepreneurship team, consists of focussing attention on Innovative Businesses with Global Presence, which we term EIPG's (Empresas Innovadoras de Presencia Global) or "Empresas Gacela" (Gazelle Businesses).
This is a long-term job that has to be co-ordinated between different agents; it also calls for enhanced co-ordination and dialogue with public and private agents whose activity is centred around the figure of the entrepreneur, and with entrepreneurs themselves.
Innobasque's Entrepreneurship Council is made up of people and entities with weight and experience in the sector, and is very aware that the value of entrepreneurship in our society does not receive the recognition it deserves; hence the task to be embarked upon is very ambitious from every point of view.

At present, this **Strategic Approach** rests upon**5 Axes of Action:**

- **EK1 Support and backup for the "Connect Gunea" model as a process of creating EIPG's (Innovative Businesses with Global Presence).**
- **EK2 Processes of Financing EIPG's.**
- **EK3 Intra-entrepreneurship**
- **EK4 Identifying the indicators of the Entrepreneurship field**
- **EK5 Culture and Mobilization of Entrepreneurship**

And finally we would mention that the Executive Council of the Advanced Entrepreneurship Department is made up of a total of 73 people spread throughout 5 i-Talde's, corresponding to the 5 axes of action mentioned.
Department Manager: Ignacio Lakunza

VI. EK3. Intrapreneurship

1.- Aim of the Project.
The aim of the cases study in intrapreneurship is to analyse in a systematic way practical experiences in Intrapreneurship to disseminate the lessons learned and the pertinent recommendations between the agents of the basque system of "intrapreneurship" by means a sensibilization programme for SMEs.

This study must use the practical experiences of the enterprises involved. It should not be a description of a theory, system or formalized management tool but the descriptive explanation of how the chosen enterprises have lived and still live the intrapreneurship practice

The cases study and the subsequent dissemination programme should attract interest about intrapreneurship in enterprises of any size and activity.

2.-Coordination team.

- Internal Interlocutor: José María Ruíz Urchegui
- Thematic Coordinator: Carlos Ochoa Laburu
- Methodology Coordinador: Oscar Villarreal

3.-Selection of eight enterprises in which to carry out the cases study

1. Case: Familiar Manufacturing Small Enterprise: TTT.
2. Case: Familiar Service Big Enterprise: Sener
3. Case: Familiar Manufacturing Big Enterprise: Grupo Ormazabal, Ikusi
4. Case: Service Small Enterprise: Abantail,
5. Case: Service Small Enterprise: Vicomtech
6. Case: Service Small Enterprise: Progenika Biopharma
7. Case: Manufacturing Small Enterprise: Batz
8. Case: Manufacturing Big Enterprise: Fagor Experience

4. Type of Project
University-Enterprise Collaborative Project.
Coordinator:University of the Bassque Country. (Escuela Politécnica de San Sebastián)
Participants: Mondragon University, Deusto University

5. Project Methodology: Multiple cases study
Some Documents that explain this methodology:
Nueva Metodología Presentación casos.ppt
Proyecto cooperación universidad empresa.ppt
Presentación resumida Casos Temáticos.ppt

6. Schedule

- **April**
  - Team constitution
    - Minimun two people per School (8 to 10 people)
  - Conceptual Frame of the Project
    - State of the Art, Hypothesis, Methodolgy
  - Contact with enterprises
  - 22 abril, I-Talde. Meeting
- **May**
  - Methodological seminar
    - Who is going to do what?
  - Beginning of the Survey
- **June**
  - Conference on Intrapreneurship. Biscay Tecnological Park (Zamudio)
    - Keynote spaekers
    - Theoretical: Iñaki Dorronsoro
    - Enterprise:
- **September**
  - Conclussions and Final Report

Implementing Ideas of Entrepreneurship in Higher Education: Case Study of Lithuanian Virtual University

Danguole Rutkauskiene and Egle Butkeviciene

Abstract— **The aim of this article is to explore the ways the university could act as entrepreneur. This article suggests that one of the ways to be innovative is a shift from traditional university to university in virtual space. The article is based on a case study of Lithuanian virtual university (LVU). The first part of the article discusses the role of entrepreneurship ideas in education. The second part presents a case study of Lithuanian virtual university that could serve as an example of innovative thinking in the context of higher education development.**

I. Introduction

Entrepreneurship is usually defined as a spirit of creative risk taking. The main ideas of entrepreneurship usually are implemented by innovation - oriented enterprises but the scope of entrepreneur ideas should not be limited to business sector. The core ideas of entrepreneurship could be implemented also by universities.

Nowadays universities are widely implementing new ideas. One of the new kinds of university is university acting as entrepreneur. University that is embedded in some city is using all the complexities of this environment as a learning space. University is not a distinct, isolated institution, but rather a part of complex network involving business enterprises, governmental bodies, educational institutions and non-governmental organizations. University has to find its place in this network and benefit from the social partnership.

This article aims to explore the ways the university could act as entrepreneur. The article discusses the role of entrepreneurship ideas in education. In the article the shift from traditional university to university in virtual space is considered to be an innovative idea. The article is based on a case study of Lithuanian virtual university (LVU), which is investigated as an example of innovative thinking in the context of higher education development.

II. Entrepreneurship in education

> *Entrepreneurship is the lifeblood of any growing economy.* (Scott's Blog, http://entrepreneurs.about.com)

In recent years there is a tendency to incorporate the total quality management (TQM) ideology in to the strategy of the university. Even the concept of Total Quality Management (TQM) was developed by W. Edwards Deming after World War II and focused on improving the production quality of goods and services, the basic assumptions of this ideology are also significant to contemporary education institutions. TQM is a management philosophy that seeks to integrate all organizational functions (marketing, finance, design, engineering, and production, customer service, etc.) to focus on meeting customer needs and organizational objectives [1]. Thus, according to the concept of total quality management, the main attention has to be given to the meeting of consumers' needs and a continuous improvement of organizational performance.

As Audrone Juodaityte notices, there is much of debate on necessity of managerial ideas and managerial theories such as total quality management, entrepreneurship, at higher education institutions. The criticism is devoted to such terms or ideas as "meeting consumer needs", "control and management", "standardization" [2]. Nevertheless the majority of scholars admit that ideas of total quality management and entrepreneurship are relevant for adoption by education institutions [2]. As Dheeraj Mehrotra emphasizes, "in this way, the teacher and the school are suppliers of effective learning tools, environments, and systems to the student, who is the school's primary customer. The school is responsible for providing for the long-term educational welfare of students by teaching them how to learn and communicate in high-quality ways, how to access quality in their own work and in that of others, and how to invest in their own lifelong and life-wide learning processes by maximizing opportunities for growth in every aspect of daily life. In another sense, the student is also a worker, whose product is essentially his or her own continuous improvement and personal growth" [3]. In that context, educational institution has continuously to improve performance and try to find innovative ways to present its services.

In this context we could ask a question: Could *homo academicus* be an entrepreneur? Could we speak about implementation of ideas of entrepreneurship into the context of higher education?

In the article we understand *entrepreneurship* as processes of creativity and innovation that clearly require managers or other people to orient themselves towards their work in a novel way [4].

Alan M. Glassman, Richard W. Moore, Gerard L. Rossy, Kent Neupert, Nancy K. Napier, Daryl E. Jones and Michael Harvey have defined *academic entrepreneurship* as creation or seizing of opportunities within a university setting, regardless of resources available [5]. In 2003 writing their article about academic entrepreneurship, Alan M. Glassman, Richard W. Moore, Gerard L. Rossy, Kent Neupert, Nancy K. Napier, Daryl E. Jones and Michael Harvey argued, that they had "discovered, not unexpectedly, that although considerable research exists

D. Rutkauskiene is a head of e-Learning Technology Centre**,** Kaunas University of Technology. Centre was established after reorganization of Distance Education Centre, which has originated in 1996. She is also associated professor at Department of Multimedia Engineering, Kaunas University of Technology (phone: +370 682 39200, e-mail: danguole.rutkauskiene@ktu.lt).

E. Butkeviciene is associated professor at Department of Sociology, Kaunas University of Technology (phone: +370 686 15858, e-mail: egle.butkeviciene@ktu.lt).

on private sector entrepreneurship, and some focuses on public setting entrepreneurship" and they "could find nothing on academic entrepreneurship" [5]. Vijaya Sherry Chand and Geeta Amin-Choudhury express similar views saying that the concept of entrepreneurship with a 'social dimension' just recently has been extended to other fields like public sector and university management, the non-profit sector and even ecologically friendly enterprises [6]. Michael A. Peters and Tina Besley, following Berglund and Holmgren (2006), argue, that "the focus on entrepreneurialism in the realm of education seems to be stuck in the functionalist paradigm" [8]. Michael A. Peters and Tina Besley cite Berglund and Holmgren: 'The fact that all theory is based upon some sort of philosophical assumptions regarding ontology, epistemology and the nature of the human being has not (yet) been received with an extensive discussion in mainstream entrepreneurship research' (p.3). In this context universities are understood as 'engines of economic growth' [7].

Thus, as Chell argues, behave entrepreneurially is (1) to engage in a process that creates value; and that value serves two purposes; it positions an enterprise among competitive enterprises, and it generates wealth that is to be distributed amongst its stakeholders [8].

In this context we could summarize that the implementation of ideas of entrepreneurship help universities to create competitive advantage, address students' as customers needs more properly, and generate wealth.

III. Development of Lithuanian Virtual University

Lithuanian Virtual University (LVU) programme was established as the next step of implementation of the programme „Information Technologies for Science and Studies 2001-2006". The main aim of this programme is to ***develop science and study system using information communication technologies***.

Lithuanian Virtual University starting from 2007 seeks to address needs of all educational sectors (Universities, Colleges, Vocational and Teachers education centers, Secondary schools, etc.)

The goal of programme LVU for the year 2007-2012 is "to create the conditions and support for the program participants to implement and develop their activities virtually, acting on the basis of networking model, using the accumulated experience and already developed infrastructure of information technologies, as well as to delivery higher education and other services to Lithuanian citizens and to compete in the international market. One of the tasks of this program is to encourage virtual e-learning processes" [9].

As Fig. 1 shows, LVU programme is made up by four closely related sub-programmes:

- „Promotion of E-learning Processes in Virtual Environment" (EMSaS),
- „Development of Lithuanian E-learning Infrastructure" (LieDM)",
- „Development of Lithuanian Science and Study Information Integrated Environment"(LABT)"
- „Development of Planning, Management and Self-service Infrastructure for Lithuanian Science and Studies"(LieMSIS) [9].

Fig. 1. Sub-programs of Lithuanian Virtual University

A. *LABT programme*

The main aim is to develop IT based Lithuanian science and study integrated information space, combining traditional and e-libraries, e-publishing, information search and its supply to users and providing virtual services to employees of Lithuanian science and study institutions, students, citizens and other e-systems [9].

Main areas of activities [9]:

- Lithuanian Virtual Library (LVB);
- Lithuanian Academic E-library (eLABa);
- Lithuanian ETD Documents DB;
- Lithuanian Science Publications DB (PDB);
- Lithuanian academic e-publishing;
- LABT base infrastructure.

B. *LieDM programme*

The aim is to further develop Lithuanian Distance Learning Network LieDM and support its activity, create information technology based and integrated e-learning space, providing possibilities for every Lithuanian citizen to learn as well as retain and develop competences all life-long despite the dwelling place [9].

Programme is dedicated to support and develop e-learning infrastructure as well as to develop e-learning technical possibilities in institutions. This aims at development of some common virtual environment for teacher and student collaboration [9].

C. *LieMSIS*

The main aim is a guarantee for successful development and competitive ability of all its institutions, ensuring proper quality of higher education [9].

The programme seeks to develop study information system (IMSIS) and to implement science and study information system of generalized data (AMSIS). This will provide possibilities for educators and students to accumulate and manage information recourses [9].

D. EMSaS

The tasks „Promotion of E-learning Processes in Virtual Environment" aims at further development and support of united activities and virtual processes of education institutions, as well as to create possibilities for study quality assurance, improvement of Lithuanian academic sector international competitiveness and closer integration into the European higher education space, international thematic networks, closer cooperation of institutions and sharing of experience [9].

According to results of empirical study that implies survey done in 2008 (with a sample of 177 respondents – faculty/lectures from higher education establishments) and 2 focus group discussions with educators and with students, there is a big interest but rather low awareness of LVU activities. 41.3 percent of respondents indicate that they know LVU programme, and 63.7 percent of respondents say that they know similar programmes in foreign countries; nevertheless just 3.4 percent of them indicate that they know LVU activities very well.

Educators would like to participate in the LVU programme: 83.9 percent of respondents expressed their willingness to participate in the programme and to offer distance education courses to students or to wider public. 52.9 percent of respondents said that they would like to use LVU platform for delivery of distance education courses not just to their students but also to public; 44.3 percent of respondents would agree to this just in the case of appropriate financing.

The tendencies of survey 2008 correspond to the data of previous surveys (in 2005 and in 2007). The main factor which had influenced educators to start organizing distance education courses was **pursuit for innovations**. This shows that educators try to diversify study methods and take risk of using new means in study process. Innovation as the main motive was indicated by 70 percent of respondents in survey 2007 and by 75 percent of respondents in survey 2005. The least significant motive is financial reasons as just 12 percent mentions that they started distance education courses due to financial reasons.

According to 2007 opinion survey data, educators are most likely (77 percent) to use WebCT as a tool for providing course materials to students. There is a significant increase also in the use of open source programs (21 percent).
The majority of educators (87.4 percent) consider that distance education has a future in Lithuania and just 1.1 percent is of an opposite opinion.

The demand for DL courses is increasing in the areas of formal, as well as non-formal education. The methods used to provide DL services differ from traditional ones, thus new institutions is essential in order to provide these DL services and address needs of educators as well as students.

IV. Concluding remarks: Entrepreneurship in development of Lithuanian virtual university

In this article, we considered implications for defining entrepreneurship in higher education. In this context we could summarize that the implementation of ideas of entrepreneurship help universities to create competitive advantage, address students' as customers needs more properly, and generate wealth.

The programme of the LVU is innovative and addresses several types of customer needs, incorporating ideas of entrepreneurship:

- to expand information infrastructure of Lithuanian science and studies, applying available resources in new ways;
- to develop effective and coherent, available and continuous educational system and provide opportunities to study life-long;
- to ensure the quality of education facilitating easier accession to study resources, opportunity for Lithuanian citizens to obtain knowledge, skills and qualifications using information communication technologies;
- to create common space (or common gates) to all electronically delivered courses (in the future - integrating into the common European educational space).
- to address needs of disabled or people with special needs for education using ICT.

In this context, LVU programme seeks to to competitive with traditional universities, arrange existing resources in new ways, and tries to facilitate study process addressing to customer needs.

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Guidelines towards a European Standard for Quality Assurance of Student Placement in Enterprises

Doru Talaba, Aura Moja, Edmund Zirra

***Abstract* - Student Placement in Enterprises has a great positive impact for the future employability of students after graduation because it has as a main purpose to expose the students to real working environments. As at present the current implementation across Europe varies in terms of clarity and compatibility between various countries, in order to facilitate exchanges at the scale of European Union, especially within the Erasmus programme, common quality requirements should be defined in order to facilitate transparent exchanges and proper assessment of learning outcomes. This paper presents an attempt generated within the European University – Enterprise Network for the development of such a framework. After a brief introduction of the matters involved, the principles proposed are outlined and followed by some basic definition and principles for quality that would be needed to be implemented with Universities curriculum development and training process as well as with processes within the Enterprises. Some conclusions are provided at the end of the paper.**[1]

1. Introduction

It has been demonstrated already that Student Placement in Enterprises has a great positive impact for the future employability of students after graduation because it has as a main purpose to expose the students to real working environments and train the necessary social competences that will allow them to act easily within the world of work either for identifying a job or to act naturally within the enterprise environment after employment. Nevertheless, Student placement is still not integrated as a standard component in the academic curriculum of all European Universities. Even when the Student Placement is foreseen in the curriculum, the provisions are often incomplete, the learning outcomes poorly defined and quality control procedures are not always defined. It must be noted however that in some European countries a kind of Reference Centres for Practical Placement (RCPP) are working for a number of years and proved to support and guide the quality improvement of this important activity. Nevertheless, supposing the Practical Placement of Students (PPS) is solved locally by each University either by using the RCPP model or other equivalent that offers the confidence of a quality practical placement, it is still difficult to know and check **trans-national** placements in the host enterprise in the regions across a wide area such as Europe. This is the reason why a systematically developed quality system for Student Placements in Europe must be developed and this task has been undertaken at the moment by the European University – Enterprise Network EUE-Net. This paper presents the first attempt for developing a set of guidelines with the aim of building a framework for Student Placement organisation across Europe that will help the continuous quality securing and improving of this important student learning activity.

2. Few Principles

While there is always a permanent relationship and interaction between the companies and the actors at universities in the target region, like Technology Transfer Units, Career Services or directly with departments and lecturers, these contacts could form a regional network of universities and enterprises, where the partners involved are well known by each other and can be easily contacted. Consequently, all the relevant requirements for international student exchanges could be easily checked locally by **a certification body**. It would be also easy to visit the regional companies with the aim of proving the quality of the placements and supervision of the international students when necessary by the same certification body. The only need for such a principle to work is the existence of clear *guidelines* or even *standard* for quality of practical placements of students against which the certification should be made.

In contrast with the ISO 9000 series of standards, where the enterprise certification is pushed by the market and undertaken entirely by the enterprises, in case of the Quality Assurance of Student Placements (QASP), the certification should be undertaken entirely by the certification body (RCPP) which will recover its expenses from the fees perceived for organizing PPS.

The implementation of the new Erasmus-placement programme gives a good chance to establish a new and urgent motivation for solid and permanent quality control of placements, as well as for supporting higher education-industry cooperation.

To avoid multiple visits to companies for the same purpose, the regional quality Reference Centre for Practical Placements (RCPP) for students could thus act as the body responsible for such quality checks, as well as for providing adequate information for recruiting students from abroad, promoting the mobility of students in the industry and dissemination of results.

A possible procedure is based on the principle that an enterprise signs up for taking part in the programme by accepting the requirements and standards set up for recruiting students from abroad as well as regular audits carried out by RCPP. If the

[1] Doru Talaba, Coordinator of EUE-Net - European University Enterprises Network, talaba@unitbv.ro
Aura Moja, Business Excellence Manager, Siemens PSE Romania, aura.moja@siemens.com
Edmund Zirra, Director of BEST/KOOR Career Service, University of Karlsruhe, edmund.zirra@hs-karlsruhe.de

RCPP issue the certification, the company will obtain a status of an Erasmus-Enterprise which is eligible to offer Erasmus-Placements for Erasmus-Students.
For this reason, the RCPP should have the qualification and capacity to perform the equivalent of a **certification** task with respect to the Enterprises. Reversely, in a later stage it could be possible that the RCPP database develop and maintain a classification of the University courses portfolio and even a certification according to standards developed in cooperation with the Erasmus Enterprises. This is already an existing practice if we count some courses promoted by the industry (for example in the IT and communication sectors) that could be organized within the Universities only after the prior accreditation of the course by the relevant industrial body.
In order to create a European Quality Reference Network a general standard for integrated practical training periods needs to be developed, even for those placements, which are not financially supported by a European programme.
Such a European Quality Reference Network (called hereinafter "Q-PlaNet") will be an efficient tool for the improvement of the quality of placements and the volume of student mobility. This would positively effect the reception of the Erasmus-Placement programme, considerably improve the employability of graduates and thus support the goals of the Lisbon strategy.
In order to establish a quality assurance model to drive the Network constitution in a sustainable way for the student placements in Europe, two stages are needed:

Stage A. First a standard needs to be developed in a similar manner as for the ISO 9000 series, including thus the following components:

- Component 1: "*Quality Assurance of Student Placements (QASP) – Fundamentals and vocabulary*" including the basics of what QASP means and also the core language of the topic. A guidance document, not used for certification purposes, but an important reference document to understand terms and vocabulary related to quality of student placements in enterprises.
- Component 2: "*QASP requirements*" is intended for use by any enterprises which want to prepare in view of hosting student placements. It provides a number of requirements that the enterprise needs to fulfil if it is to achieve the necessary quality level of the placement. It includes a requirement for the continual (i.e. planned) improvement of the Quality System. This is the only implementation for which the auditors of third party may grant certification.
- Component 3: "*Quality systems for management of Student Placements*" - Guidelines for performance improvements. It gives advice on what could be done to enhance a mature system. This standard is not intended as a guide to implementation but only to improvement.

These components will be undertaken and developed thoroughly within the multi-lateral project Q-Planet. A first set of principles developed at the "Transilvania"University of Brasov Romania in cooperation with Siemens is presented below in section 6.

Stage B. Definition of a standard for accreditation at European level of the RCPP and establishing of EUE-Net as an Accreditation body at European level. For this reason, the accreditation procedures need also to be established. Nevertheless, this is a more complex process, depending much on the particular conditions in each country for the organisation of student placements.

Thus regional Networks of certified enterprises will be established by the RCPP's while the accreditation body will maintain the "Network of Networks" (i.e of RCPP's). Structured online tools assembling services of these bodies will be set up and maintained in order to evaluate the capacity of organising student placements across the various disciplines and facilitating their organisation as well at European level. The federated information will be certainly useful to all actors involved into the system:
- to the Universities in order to realistically assess the possibility to organise quality student placement within the planned courses;
- to the RCPP in order to assess the need to recruit more enterprises to meet the University needs in student placement organisation;
- to the enterprises in order to observe the availability for internship in various areas in case of planned developments that need recruitments.

3. Some basic definitions:
Accreditation=Third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment tasks.
Certification=Third-party attestation related to products, processes, systems or persons.

4. Accreditation procedure
The RCPP candidates will receive a visit plan, which provides a proposed timetable for the activities to be assessed. Any improvement actions identified against accreditation requirements will be notified in writing during or immediately following the assessment visit. The candidate organisation is then asked to advise how it intends to address them. Once the improvement actions have been implemented the accreditation will be granted.

Maintenance of accreditation
The accreditation will be confirmed on an annual basis by surveillance visits, with a full reassessment

every fourth year. The first surveillance visit takes place 6 months after the Grant of Accreditation.

5. Certification procedure

The RCPP investigates the potential enterprises of interest and advises them to implement a quality framework for student placement organisation and its public certification. Upon the enterprise agreement of the terms and conditions, the certification procedure starts by submitting a visit plan, which provides a proposed timetable for the conditions to be assessed to the enterprise. Any improvement actions identified against QASP requirements will be notified in writing during or immediately following the assessment visit. The candidate enterprise is then asked to advise how it intends to address them. Once the improvement actions have been implemented the QASP certification will be granted.

Maintenance of certification

The certification will be confirmed on an annual basis by surveillance visits, with a full reassessment every third year. The first surveillance visit takes place 6 months after the Grant of Certification.

6. Principles for a standard of Quality Assurance of Student Placement in Enterprises (proposal)

A. Requirements for the Universities:

1. The university shall have a documented process for the design of the curriculum.
2. The Student placement shall be regarded as a regular subject in the curriculum and shall be included in the course structure from the design stage with provisions at the same level of detail as for any other subject, including objectives, competences, learning outputs, credits allocation etc.
3. It is recommended that the Student placement subject within the curriculum be a compulsory component with a duration of at least 2 months.
4. The University shall design and develop the course in cooperation with a sufficient number of enterprises that are able to easily support the course for the needed student placements. The enterprises shall be consulted in the design stage within a documented process with records that clearly show the input required and provided by the enterprises as well as the way this input has been integrated into the course design.
5. Each course shall have a network of supporting enterprises that contribute to the design and are continuously involved in the improvement of the course content. The enterprises shall be recognized as supporting the respective course.

   Resources
6. The University bears the sole responsibility for the fulfilment of the Student Placement and must secure appropriate resources and links with the potential Enterprises and mediation bodies such as Regional/National/International Reference Centres for Student Placements or Career Service.

   Human resources
7. The University shall name a person that will be in charge with ensuring the quality of practical placement for each course. This person shall:
   - Organise, monitor and assess the learning outcomes of practical placement results for each student;
   - ensure the interface between the University and the external concerned parties in any matter related to Student placement;
   - constitute, maintain and develop a network of enterprises that support the course.

   Financial resources
8. The University shall ensure that all the financial resources needed for the good progress of the practical placement are available. They can include, depending on each situation:
   - time allocation for marketing the course aimed at attracting the interest of enterprises;
   - budget for international exchanges;
9. Processes / procedures:

   By means of one or more documented procedures, the University shall define:
   a. The preparation process for the practical placement
      - determining / describing the learning outcomes;
      - the evaluation of the programme proposed by the Enterprise and assessment of the learning outcomes at the end.

   b. The methods used for evaluating the results of the practical placement, such as:
      1. from the student's point of view:
         - tasks
         - gained knowledge;
      2. from the point of view of the tutor in the organisation:
         - solving the task
         - perspective;
      3. from the point of view of the tutor in the university:
         - solving the task
         - the progress of the practical placement towards the designed learning outcomes.

4. For the case of International exchanges, the student placement shall be organized either as an exchange between two universities or as a direct relation between a University and an Enterprise in another country (direct trans-national student placement).
    - In the case of inter-university exchange, the host University undertakes the organisation of the student placement in the same manner as for the local students in an integrated way. The exchange takes place as for any other regular exchange with credits transfer and the same formalities for recognition in the sending institution.
    - In the case of direct trans-national student placement, the Enterprise must have a third party certification of fulfilling the present guidelines provisions.

B. Requirements for the Enterprises:

1. The organisation shall declare its commitment for ensuring the quality of the student placement. Top management shall make sure that the objectives that were set in order to ensure student placement quality are known at all relevant levels and by all relevant functions.
2. Resources:
   The organisation shall ensure that all the resources needed for the good progress of the practical placement are available.
   <u>Human resources</u>
   The personnel involved in the practical placement shall:
   - be aware of the importance of ensuring the quality of practical placement;
   - be trained according to the management system for practical placement quality;
   - be informed and trained as needed with the changes that appear within the management system for practical placement quality;
   - keep records of the conducted trainings.

   The organisation shall name a person that will be in charge with ensuring the quality of practical placement. This person shall:
   - report practical placement results to the top management;
   - ensure the interface between the organisation and the external concerned parties;
   - ensure the implementation and conformation with the management system for practical placement quality.

   <u>Infrastructure</u>
   The organisation shall make sure that the infrastructure needed for the good progress of the student placement is available. It includes:
   - IT equipment (software / hardware);
   - communication equipment (telephone / network / internet access);
   - work space proper for the good progress of the student placement quality assurance activities;
   - infrastructure for the practical placement.

   <u>Financial resources</u>
   The organisation shall ensure that all the financial resources needed for the good progress of the practical placement are available. They can include, depending on each situation:
   - budget for marketing activities aimed at attracting students;
   - budget for remunerating students;
   - budget for the personnel that is involved in these activities.
3. Processes / procedures:
   By means of one or more documented procedures, the organisation shall define:
   a. The preparation process for the practical placement
      - the evaluation of the marketing activities;
      - the methods used in order to determine the number of students and the period of time required for the practical placement;
      - determining / describing the jobs.
   b. The recruiting process
      - establishing selection criteria for students (knowledge, personality, technical / school results, special knowledge – such as foreign languages);
      - description of interview methods.

c. The methods used for evaluating the results of the practical placement, such as:
    1. from the student's point of view:
        - tasks
        - gained knowledge;
    2. from the point of view of the tutor in the organisation:
        - solving the task
        - perspective;
    3. from the point of view of the tutor in the university:
        - solving the task
        - the progress of the practical placement.

4. The organisation shall perform an analysis of the practical placement activity every year.
   Input:
   - corrective / preventive actions;
   - evaluation results;
   - improvement proposals for the processes regarding the practical placement activity;
   - etc.

   Output and records:
   - improvement measures;
   - resources needed;
   - etc.

5. Organisation of the activities during the Student Placement in the Enterprise
   During the practical placement period, the student will be supervised by a manager of the organisation and by a university professor.
   At the beginning of the practical placement period, the person in charge with practical placement quality assurance shall:
   a. Assist the student in accomplishing all needed legal formalities as well as those required within the company;
   b. Organise the student training on company safety regulations and the specific regulations regarding fire prevention;
   c. Secure the student training on the company processes, procedures and other regulations;
   d. Supervise the student in his/her new workplace.

   At the end of the practical placement period, the person in charge with practical placement quality assurance shall coordinate the evaluation of the practical placement and shall assist the student when performing all the formalities required at the end of the practical placement period.
   During the student placement period the person in charge with practical placement quality assurance shall perform sample assessments of the way the documented processes are followed.
6. During the student placement period the person in charge with practical placement quality assurance shall record all non-conformities that occur, as well as all potential ones. These non-conformities must be analyzed, their cause identified and appropriate corrective/preventive measures decided in each case.
7. Internal audit
   An internal audit process must be involved, either a specific provision in the regular internal quality audit of the company or if not available or possible – a dedicated process for the quality of student placements.
8. Other provisions for Enterprises

- The planning of the student placement in enterprises shall be made in full compliance with the objectives and content requirements established in the relevant official University curriculum/syllabus document.
- A permanent recorded communication system must be established between the student placement supervisors in Enterprise and University respectively.
- When quality assurance systems are available (e.g. ISO 9001:2008), an integration of the present provisions within the overall system is recommended in order to avoid further burden and bureaucracy.
- When a Corporate Social Responsibility system is available, an integration of the present provisions within the overall system is recommended in order to avoid further burden and bureaucracy.

7. Conclusions

Student placements are of great importance for the employability of students and probably constitute one of the major cooperation areas between the enterprises and the Universities. It is recognized by both Universities and Enterprises that are usually hosting student internship that this activity is of mutual benefit for all actors: University, Enterprise and Students – it is a 3W (win-win-win) activity.
Nevertheless, looking at the heterogeneity of provisions and organisation at European level, it clearly appears that at the moment this training component is largely underdeveloped compared with the other subjects in the curriculum. Urgent quality measures are needed first of all within the Universities in order to properly design this activity, but some quality requirements must also be implemented within the hosting Enterprises for the mutual benefit.

This paper presents a first attempt in Europe for the development of a set of requirements to be implemented for the organisation of Student Placements in Europe in a compatible and transferable manner. We are aware that developing these guidelines towards a complete and accepted

set of provisions will be a long journey and this paper should not be regarded otherwise than a point for starting the debates, the long series of which we hope to be initiated in Cyprus, within ERACON Conference. It is thus expected that the present set of requirements will significantly change in the coming months, especially after consultations with the Enterprise sector as well.

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Teaching and learning service innovation: a case study

Lorna Uden

Abstract - **In today's knowledge intensive economy, it is vital that organisations are involved in innovation. Unless an organisation is innovative, it will not survive. Innovation and entrepreneurship have become the most important parts of an organisation. Organisations increasingly rely on continual innovation. Employees of organisations are encouraged to participate in innovation and entrepreneurship. This means that organisations are seeking graduates who have the knowledge and skills in innovation and entrepreneurship. It is important therefore to include the teaching and learning of innovation and entrepreneurship in the curriculum of higher education. This paper offers a case study describing the teaching of service innovation at the author's university. The paper begins with a brief review of innovation, followed by the emergence of a new discipline known as service science, and highlighting its importance. The paper then describes the teaching of the new module, Service Science, to the final year computing students. It shows how students can learn about service innovation through emerging service dominant logic using problem-based learning to co-create value between students and teachers. The case study has important implications for the teaching of innovation to students. The paper concludes with suggestions for further research to promote value co creation in learning.**

I. INTRODUCTION

Innovation is a strategic priority for all organisations. Wealth flows from innovation. Although efficiency is important for business success, it is not sufficient to sustain growth. Innovation and the balance sheet are inextricably linked. Organisations cannot afford to ignore innovation. There are many definitions given to innovation. Reference [1] define innovation as the introduction of a new combination of the essential factors of production into the production system. Innovation typically involves the new product, the new technology, the new market, the new material and the new combination. The innovation process encompasses the technical, physical and knowledge-based activities that are central in forming product development routines [2]. Another definition, given by [3] defines innovation as a knowledge process aimed at creating new knowledge geared towards the development of a commercial and viable solution. Innovation is a process wherein knowledge is acquired, stored and assimilated with the aim to create new knowledge, which embodies products and services [4]. Innovation can be a new product, a new technology or a new service. It is often related to change that can be either radical or incremental. Innovation often results from the planned and deliberate recombination of ideas, people and objects from the past that spark new technological revolutions, sought after service concepts and effective business models.

Innovation can transform business, create new markets and drive economic growth. Companies that can create a culture of innovation are the ones that will succeed in the next era of business. Innovation involves the ability to anticipate customer needs and market dynamics, then quickly respond with flexible business processes and technology to meet these challenges [5].

Entrepreneurship is defined as an activity that leads to the creation and management of a new organisation designed to pursue a unique, innovative opportunity www.heacademy.ac.uk/951.htm.The study of entrepreneurship in universities, especially in Europe is still in its infancy. However, it has spread rapidly over the past few years.

The aim of the entrepreneurship programme in universities is to produce graduates who are capable of being innovative and who can recognise and create opportunity, take risks, make decisions, analyse and solve problems and communicate clearly and effectively [6]. It is generally accepted by academia that it is possible and advisable for all universities with a focus on entrepreneurship to develop an individually tailored model, especially with regard to the relevant target groups, teaching content and methods as well as the outcomes to be achieved. However, the model of entrepreneurship must be in line with the strategic concept of the university [7].

It is the author's belief that innovation and entrepreneurship can be learned and taught. As educators we have a role in guiding learners to become more entrepreneurially minded. The teaching of entrepreneurship involves both arts (e.g. creative and innovative thinking) and science (e.g. business and management competences.) [8]. There is a need to shift from teaching to authentic learning. Reference [9] believe that concrete experience gained through the active participation of students should be part of the curriculum. The role of opportunity – discovering, evaluating and exploiting it – is at the core of entrepreneurship [10]. The author concurs with [8] [7] that the traditional approach of teaching by which knowledge is conveyed to the students is not appropriate for entrepreneurship education. An interactive, creative, collaborative and problem-solving project-based learning is preferred.

According to [11] the challenge to entrepreneurship education is in facilitation of learning to support the entrepreneurial process. Some researchers [12], [13] argue that traditional teaching methods such as lectures and examinations do not activate entrepreneurship. Traditional methods have to be complemented with entrepreneurial approaches [12]. This means learning by doing and providing opportunities for students to actively participate in, as well as control and mould the learning situation [14]. It is important for students to understand and apply theories of entrepreneurship.

In developed countries such as the USA and the UK, services represent over 80% of the GDP and labour force. Despite the economic domination of services in the modern world, there is very little evidence of formal research by companies or governments on service research and innovation compared to tangible products and technologies. There is also very little attention paid to service innovation in academic literature [15].

Several national governments such as UK, Finland and USA have already recognised that they must be innovative or they will not be able to compete globally. Reference [15] identified that companies tend to build their business case for service innovation on two primary foci:

1. On service innovation that will increase productivity and efficiency, making services more cost effective, and
2. On growing revenue through service innovation by a new service or improving the service experience to increase customer loyalty and market share.

In order to be competitive, companies and countries are increasingly recognising the need for service growth, innovation and research. They will look to hire people who can help them to be innovative.

Computerworld recently examined that question with the help of three research groups. Its ironic consensus: the most sought-after IT workers in 2010 may be those with no deep-seated technical skills at all. Basic programming and technical support jobs will continue to disappear to automation or outsourcing. But there will be plenty of opportunities for what Computerworld dubs “versatilists". This breed understands business processes, can design and execute technology plans that create business value, and can cultivate relationships inside and outside an organisation.

This paper describes the set up of a new programme, known as a service science course, to meet the above needs. The paper begins with a review of service science and its implications for service innovation for competitive advantages for companies. It then discusses a case study to teach service science at the author’s university. This is followed by showing how the co-creation of value proposed by [15] Vargo and Lusch (2008) is used to teach the subject. The paper concludes with suggestions for further research.

II. SERVICE SCIENCE

There are many different definitions given to services. Services are deeds, processes and performance [17]. Reference [18] defines a service as an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interaction between customer and service employees and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems.

Reference [19] (p.395) stated that the distinguishing characteristics of services include intangibility of service output, the lack of inventories, the difficulty of portability, and complexity in definition and measurement, and often involve joint production between buyer and supplier. A service is a set of intangible activities carried out on the customer’s behalf [20].

According to [21], services are economic activities offered by one party to another, most commonly employing time based performances to bring about desired results in recipients themselves or in other assets for which purchasers have responsibility. However, they do not normally take ownership of any of the physical elements involved**.** Reference [22] define service as the application of specialised competences (knowledge and skills) through deeds, processes and performances for the benefit of another entity or the entity itself (p.4).

Despite the many definitions given to service, there is no widely accepted definition. It is generally acknowledged that whatever is left after manufacturing and agriculture is classified as services [23].

Owing to the importance of services in today’s economy, a new discipline known as service science, management and engineering (SSME) or Service Science has emerged. A service system is defined as a dynamic value co-creating configuration of resources, including people, technology, organisations and shared information (language, laws, measures and methods), all connected internally and externally by value propositions with the aim to consistently and profitably meet the customer’s needs better than competing alternatives [24].

Service science is rapidly gaining attention around the world. Its aim is to promote service innovation using scientific and engineering approaches to the design of services, especially knowledge intensive ones. Service science is a new discipline arising from the rapid development of services across the industrial world. It is rooted in the interdisciplinary study of computer science, operations, industrial engineering, mathematics, research business strategy, management sciences, decision theory, social and cognitive sciences and legal sciences.

Why the Growth?

Reference [25] gives the following reasons for the growth. Firstly, at the macro-economic level, increasing manufacturing productivity and growing competition

from developing countries limit employment growth in manufacturing and motivate efforts to focus on higher value-added activities. Secondly, at the firm level, rising investment in intangibles, growing emphasis on knowledge management, a renewed focus on core competencies and outsourcing play a major role. Thirdly, services previously produced in-house within the manufacturing sector are now obtained via outsourcing. Fourthly, many manufacturing firms also relied heavily on telecommunications, business and computer services to stimulate greater productivity. Fifthly, manufacturing firms also moved to more closely link products to services by providing their clients with integrated product-service packages and integrated solutions. Despite the economic domination of services, there is relatively little focus from companies and government on service research and innovation compared to tangible products and technologies [15].

Every service system has unique identity and is an instance of a type or a class of service systems (e.g. people, business, government agencies, etc.). The history of a service system is a sequence of interaction episodes with other service systems, including interaction episodes with itself [26].

In the last two years, IBM has been working with universities and other academic institutions around the world to develop relevant curricula needed to build the technical talent to drive growth in the world's services-led economies. IBM's collaboration with universities and academic institutions to develop Services Science as a curriculum has significant parallels with the role it played 40 years ago in the development of computer science as an academic discipline.

There were no formal education programmes in computer science when IBM first started making computers in the 1940s. The term 'computer science' did not exist. Today there is no shortage of computer science education. Today business is shifting from a focus on hardware to a focus on services. Currently there is a dearth of formal programmes to provide the education needed to support this shift. Just as 40 years ago, IBM is working with academia to change that. Other universities with Services Science offerings include the University of California at Berkeley and North Carolina State University in the United States, Deakin University and the University of Sydney in Australia, and Tsinghua University and Peking University in China.

According to IBM, The goal of the SSME discipline is to make productivity, quality, sustainability, learning rates and innovation rates more predictable across the service sector.

The purpose of the new discipline is to bring analytical rigor to key issues such as services efficiency and services innovation. As a new academic discipline, services science will simultaneously create new knowledge as well as train the first cohorts of services experts with a strong understanding of both business and technology. Ideally they would have the technical expertise of a computer science or engineering major and the business savvy of an MBA. Recent articles in *Business Week, Financial Times, Harvard Business Review, The New York Times, Technology Review,* and *The Wall Street Journal* have highlighted this new discipline.

Why a new discipline is needed:

1. Although services dominate the world economy, academic programs and research activity in engineering and business schools do not meet the needs of this sector.
2. Services pose unique business and technical challenges. Services are co-produced by the customer and the provider on a customized basis. The provider must understand the customer's business and the customer must understand the provider's capabilities for the exchange to be successful. New tools need to be developed to measure and model efficiency and innovation in this unique context.
3. The marketplace is changing. Businesses need to be "open" - able to interact with other businesses, to be adaptive - to respond to market pressures, and to be reconfigurable - to accommodate geopolitical changes and strategic realignments. Even manufacturing and IT companies are moving towards providing *services of immediate and explicit value* to their customers, and away from selling *components that would likely be commoditized.* Services experts with a blend of managerial and technical skills are needed to meet these challenges.

Preparing students for this emerging workforce is the primary reason a service science discipline should take root. Over the next decade, IBM alone will hire thousands of service scientists. Information technology will remain a growth area and most of the new jobs will be in services.

III. TEACHING OF SERVICE SCIENCE: A CASE STUDY

We concur with IBM that a new curriculum is needed because students who are future employees of companies need research and teaching in computer science and engineering, business strategy, and management sciences to help them develop the skills required in a technology-based, services-driven economy. Students' backgrounds in engineering, business, etc, will still be extremely relevant because of the ecosystem that includes services, technology and management. That is what SSME will be preparing students for.

This new professional will have a deep knowledge in dome existing discipline, but also be skilled in the integrated science and art of service design and value realisation, by combining technology, business models and social-organisational innovations to improve business and societal system [27].

There are two types of expertise required of a service scientist or innovator: contributing expertise and interactional expertise [28]. Contributing expertise includes deep knowledge enabling problem solving and contributions to a body of knowledge of a highly specialised discipline or subdiscipline. Interactional expertise consists of knowledge of terms, concepts and approaches that allow dialogue and understanding of problems and opportunities in a specialised discipline or subdiscipline). A service innovator must have deep contributing expertise in their home discipline and a great breadth of interactional expertise across the broad range of disciplines. As mentioned earlier, the graduate required is called a "T-shaped" professional.

In view of the importance of the role service innovation plays in our modern economy, the author believes that universities should take on the role of developing graduates who understand service(s), the 'T-shaped' professional that industries want and desperately need. This means promoting the teaching of innovation, in particular service innovation in the Higher Education curriculum.

In order to take up the challenge of IBM and others to help graduates to be 'T-shaped people', we have developed several modules in service science teaching. One of the modules is Service Science, a final-year module for computing science, IT, or IS students. The Module Learning Outcomes consist of:

- Apply knowledge and understanding of service science to the design, development and evaluation of service systems
- Develop a consistent rationale for a service science setting and critically evaluate the relationship between services and innovation.
- Critically discuss the implications of service science for business and the economy.
- Critically analyse the theory and practice of service science methodology.

Coursework constitutes 80 % of the assessment. The coursework is divided into two parts: group work and individual assessment. The group work will be based on continuous assessment. The group work will make up 60 % of the assessment and 20% individual marks. There will be a test at the end of the course. This comprises 20% of the assessment marks.

Instead of adopting a traditional approach to teaching of service science, we take a different method. The method involves co-learning between teachers and students. The students are given a realistic service problem to innovate. They take ownership of their own learning and the teachers act as facilitators of the process – a catalyst [14]. Learning takes place as a combination of theory and experience. Our task as teachers is to help students develop the ability to reflect upon their own experiences and put them into a wider context, as well as give them the opportunity to make their own theoretical interpretations [12]. We base our teaching of service science on the emerging concept of service dominant (S-D) logic [16].

We believe that the learning of service science should be a co-creation of value between students and teachers, based on the principles of S-D logic from service marketing [16].

IV. CO-CREATION OF VALUE IN LEARNING

The traditional view of value, based on value-in-exchange is referred to as good-dominant (G-D) logic. According to [16], in G-D logic, value is created (manufactured) by the firm and distributed in the market, usually through exchange of goods and money. This means that the value roles of producers and consumers are distinct. The value creation is often thought of as a series of activities performed by the firm. Take, for example the manufacture of a car. The firm's production process creates value for customers through the manufacturing and delivery of the car. That is, the value is created by the firm in the form of a good. The valuable good is exchanged in the marketplace for money. Value is measured by this exchange transaction.

Service Dominant Logic (SDL)

According to [26], the most notable distinction between G-D logic and S-D logic is in the conceptualisation of service. Whereas good dominant logic views goods (tangible output embedded with value) as the primary focus of economic exchange, service dominant logic considers service - a process of doing something for another party – in its own right, without reference to goods. Service-dominant logic identifies service as the primary focus of exchange activity [22]. According to these authors, the use of the singular 'service' as opposed to the plural 'services' as traditionally employed in G-D logic, is intentional. It represents a shift from thinking about value in terms of operand resources – usually tangible, static resources that require some action to make them valuable – to operant resources – usually intangible, dynamic resources that are capable of creating value. While G-D logic views services as units of output (somewhat inferior to goods), S-D logic sees service as the product for and with another party. Value creation then moves from the firm, or 'producer' to a collaborative process. This means that in S-D logic, value is always co-created. Reference [26] argue that the purpose of economic exchange in S-D logic is service provision for (and in conjunction with) another party in order to obtain reciprocal service. That is, service is exchanged for service.

Although goods are sometimes involved in the process, they are appliances for service provision. The goods are conveyors of competences. Whether service is

provided directly or through a good, it is the knowledge and skills (competences) of the providers and beneficiaries that represent the essential sources of value creation, not the goods that are sometimes used to convey them [26].

The new service dominant (S-D) logic is concerned with value-in-use. In S-D logic, the roles of producers and consumers are not distinct. Value is always co-created between producers and consumers. In the context of the car making example, the manufacturing firm applies the knowledge, skills and capabilities to transform raw materials into a car. In this case, the car is only an input into the value creation that occurs as a customer uses it (in transportation, self-identity, etc.) and integrates it with other resources. Customers and manufacturers co-created value. That is, manufacturers applying their knowledge and skills in the production of a good; customers applying their knowledge and skills in the use of it in the context of their lives. At the same time, customers integrate and apply their own resources to produce service (often exchanged in the form of service rights – money – that the firm can use for its own value-creating activities [16].

In S-D logic, the notion of value co-creation suggests that there is no value until an offering is used. Experience and perception are essential to value determination [22]. Offerings must be integrated with other market facing (from other firms) and non-market facing (e.g. personal/private and public) resources for value to be created. Value creation typically requires resources beyond a two-party system, often involving a firm, its customers, suppliers, employees, stakeholders, and other network partners [22].

In S-D logic, the distinction between the producer and consumer disappears and all participants contribute to the creation of value for themselves and for others. All economic and social actors are resource integrators [16]

Value co-creation among learning service systems

The author concurs with [26] that service system is a useful abstraction for understanding value and value co-creation. Value, in service system can be defined in terms of an improvement in system wellbeing and we can measure value in terms of a system's adaptiveness or ability to fit in its environment.

According to [29], a service system's function is to make use of its own resources and the resources of others to improve its circumstance and those of others. These authors argue that one way to acquire resources is through the exchange of a system's applied operant resources (service) with those of other service systems. Individuals, groups, organisations, firms and governments can be considered to be service systems if they can take action, apply resources, and work with others in mutually beneficial ways. Reference [29] use an example of a firm providing IT outsourcing service(s) by applying knowledge and skills of its employees along with processes and technologies it has in house to set up and run the IT of another firm. The co-creation of value by service systems depends on the resources of other systems as shown in Figure 1.

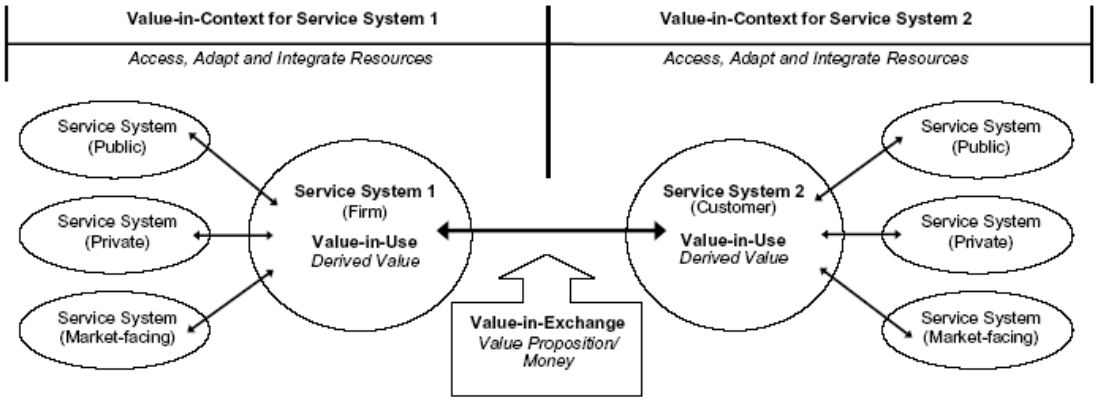

Figure 1: **Value Co-creation among service systems** (adopted from Vargo et al 2008).

Service providers (university faculty, professors, technicians etc) propose value in the market based on their competences and capabilities skills and knowledge). The value proposition is accepted, rejected or unnoticed by other service systems (students, parents) in need of resources [16]. When the value is proposed and service is made available, it is up to the other service systems, (i.e. potential customers in need of such resources) to decide whether to accept the value proposition. Reference [16] use the example of tax preparation services. Some service systems (e.g. customers) will accept the proposition of value and make a decision to exchange money for the knowledge, skills and time of a specialist tax person. On the other hand, customers may reject the direct service and opt for a more indirect service – using tax software. In either case, the

applied resources (service) of the provider must be integrated with the competences and resources of the beneficiary before value is realised. According to [16], the goal of exchange is to use the applied knowledge of others (services) as resources to better one's circumstances. They further pointed out that value is determined through use of integration and application of operant (and sometimes operand) resources in exchange among service systems.

In the co-creation of value in service, advocated by [30], the customers are active contributors to value creation. Reference [31] (p.324) points out that suppliers only create the resources or means to make sure of value for themselves. When providers and customers interact, they are engaged in co-creation of value. An important issue we need to address is how we can create value for the customers and make sure that the value proposition is relevant. Value creation is particularly important for educational services. It is the author's belief that problem based learning is the best approach to achieve it.

What is PBL?

Problem-based learning (PBL), according to [32], is, "... the learning which results from the process of working towards the understanding of, or resolution of, a problem." PBL is a way of constructing and teaching courses using problems as the stimulus and focus for student activities. The courses start with problems rather than the exposition of disciplinary knowledge. They move the students towards the acquisition of knowledge and skills through a staged sequence of problems presented in context, together with associated learning materials and support from teachers.

Barrows [32] describes the main educational goals as:

- To develop students' thinking or reasoning skills (problem solving, meta-cognition, critical thinking) and;
- To help the students become independent, self-directed learners (learning to learn, learning management).

The purpose of PBL is to produce students who will:

- Engage a challenge (problem, complex task, and situation) with initiative and enthusiasm;
- Reason effectively, accurately, and creatively from an integrated, flexible, usable knowledge base;
- Monitor and assess their own adequacy to achieve a desirable outcome given a challenge;
- Address their own perceived inadequacies in knowledge and skills effectively and efficiently;
- Collaborate effectively as a member of a team working to achieve a common goal.

PBL is a challenging and motivating way to learn because students take ownership of their problem and work in real-world situations. They perceive learning as important and relevant to their own lives.

PBL is centred on the learning that emanates from a real problem. In PBL, students spend time in learning – by identifying what they need to know, by finding out, by talking to each other and by applying their new knowledge. The primary aim is learning itself not the completion of the project – the project is the means to the end. Note that this is different from standard project work in that the ways in which the students are encouraged to tackle the problem are designed to encourage learning in a structured manner (albeit with substantial learner control). It is also different from apprenticeship and 'learning on the job' where the focus is on completing the work and learning as a by product.

In short, the key ingredients of PBL are [33]:

- the problem as the focus of learning
- learning as the purpose of the problem
- the problem as the integrator of concepts and skills
- commitment to self-learning

In addition, PBL is typically used in teamwork and small group situations as this encourages the development of reflective abilities. This *can* be achieved individually, but is often easier in a group situation.

The small group setting used in PBL encourages an inquisitive and detailed look at all issues, concepts and principles contained within the problem. The time spent outside of the group facilitates the development of skills such as literature retrieval, critical appraisal of available information and the seeking of opinions of peers and specialists. Thus PBL encourages the students to become responsible for their own and their colleagues learning.

Central to the PBL process is the co creation of knowledge in the collaborative process through the resource integrators from various stakeholders among the service systems. We concur with Vargo and Lusch [16] that the venue of value creation is the value configurations – economic and social; actors within the networks interacting and exchanging across and through the network. Value creation takes place within and between systems at

various levels of aggregation. According to [26], the smallest service system is an individual, as he or she interacts with others. This means that in our educational services, various personnel are involved in the value creation process. The use of S-D logic for educational service in our study shows that individuals having a subset of knowledge and skills (operant resources) exchanged the application of their resources with others to co-create value for the benefit of others. Because of the importance of the co-creation of value, it is necessary for us to provide an environment where different service systems involved can share and collaborate in this value creation. PBL provides such environment for that to do it.

We believe that co-creation of value between students and faculty members (teachers) is not limited to the activities of any one exchange or a dyad of service systems, it occurs through the integration of existing resources (technical service, government , parents, building, equipments such as computers, Internet, and others) with those available from a variety of service systems (transport, hospitals, administrators, cleaners) that can contribute to system wellbeing as determined by the system's environmental context. Each service system accesses resources from other service systems through exchange. These systems include internal (e.g. The university's own employees – faculty, professors, technicians, administrators, secretary, other students, etc), private (e.g. friends, family, banking, and others) and market facing (Internet providers, food, accommodation) systems and resources. Value-in-exchange is the negotiated measurement offered and received (e.g. money and value proposition - getting the learning of the subject) among exchange partners. The resources of the service provider – faculty) are adopted and integrated with a service system's existing resources (university) and value is derived and determined in context. The process continues as new knowledge is generated and exchange occurs within and among surrounding systems throughout the learning and afterwards.

5. CONCLUSION

The creation of new knowledge-based or social enterprises is vital to maintain competitiveness in a global world. The graduates of the 21st century are expected not only to be job seekers, but job creators [33]. It is important for us in higher education to address skills requirements and actual or perceived educational deficiencies. The key skills required today are computing and IT, transferable skills, employability and entrepreneurship skills. As an institution we need to produce more able, fit-for-the-job graduates. Besides the domain subjects engineering students are studying, they also need leadership, creativity, innovation, management and entrepreneurial skills.

The author believes that the goal of entrepreneurship education is to equip students with the skills, attitudes and behaviour. The learning of a complex subject such as service science involves the co-creation of value between students and teachers as well as other stakeholders who are operant resource integrators in the provision of educational service. Value creation is a collaborative process and is always co-created. In our study, co-creation of value in our educational service demonstrates that both the offerer and beneficiary of service are collaborating to create value. Problem based learning can be used for value co-creation for learning service.

We believe that co-creation of value is a useful tool to help us achieve the learning of service science by students to prepare them to be the T shaped professional that industries are seeking. In the co-creation of value for building services, it is imperative that customers and providers are both defining and creating value. The key building block of co-creation is its collaborative process though dialogue in the tutorial process. Dialogue encourages knowledge sharing. It also enables a shared level of understanding between students and teachers. Problem based learning allows us to co create value in our dialogue with the different operant resources of our learning service.

Innovation in educational service is how the firm (university, through the faculty) provides applied operant resources (through the network of people involved) that meet the needs of students relative to some other firm (university/college providing such operant resources. Further research will need to be conducted to validate the use of problem-based learning for the co-creation of value in learning.

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A Report on a Trial to Encourage Students to Set Up and Run Their Own Companies for 12 Months during the Placement Year and How It Can Fit Into a Conventional Academic Framework

Ian Sunley, Rachel Baker

Abstract - 5 years ago a new scheme was started in a group of universities in the Midlands area of the United Kingdom. The purpose of the trial was to encourage students to use their placement year to set up their own companies and run them for 12 months. The students were given free office space, training in various aspects of self-employment and access to a business mentor who could discuss ideas with them. This paper will report on how the trial works and its successes and failures and how the needs of academic awards can be assessed for students on this type of placement.

I. INTRODUCTION

This paper will look at the background to self employed placements, explain the history of the scheme and how it is implemented by one university. It will then discuss the current rate of success and give several examples of new businesses that have benefited from the scheme. The paper will explain a way that this type of scheme can be made to fit within a conventional placement scenario within a university without compromising the quality of the award.

II. BACKGROUND

A survey by the UK Department of Trade & Industry of small businesses (Table 1) showed that 69% of all companies in the UK had only 1 employee and that 99.8% had less than 250 employees. Indeed when you look at the turnover you see that over 51% of the UK turnover is generated by companies employing less that 250 people. So it is important that students leaving university need to understand about self employment as according to Birch [2002] it is more likely that many graduates will be joining a small to medium sized firm or starting their own business than becoming part of a larger organisation.

There was also requests from students to run their own companies during their placement year and Staffordshire experimented in 2004 with 2 students who registered on to the graduate Enterprise Fellowship Scheme for the self employed for their placement year to allow them to start a company producing and selling music.

They were very successful during the year and learnt a lot about entrepreneurship and business winning the best entrepreneur award in Staffordshire for 2004.

The UK government had also realised that more help was needed for entrepreneurs when in 2002 the then UK Chancellor of the Exchequer, Gordon Brown, in a speech

Table 1: SUMMARY: UK Company size Source: (Dti) Small Business Service, Jan 2002.

		Size (number of employees %)			
	=100%	*none*	*1-49*	*50-249*	*250+*
Enterprises (#)					
All industries	3,746,340	69.3	29.8	0.7	0.2
Employment ('000)					
All industries	22,622	12.8	30.6	12.0	44.6
Turnover (£million)					
All industries	2,112,013	7.2	29.0	15.1	48.6

in the Mansion House said ' too few men and women here in Britain…have started or grown a business or become self-employed and so it is time to remove the financial, cultural and other barriers to enterprise, so that in Britain, starting a business becomes the ambition of not just an elite few but of many'.

III. THE SPEED SCHEME

The SPEED Scheme, Student Placements for Entrepreneurs in Education, originally started with the first proper batch of students in 2005 as the E^2O scheme, Entrepreneurship, Enterprise and Opportunities, and then in 2006 became the SPEED scheme joining 13 other UK universities funded by the HEIF, Higher Education Innovation Fund. The scheme aims to offer students a way of experiencing setting up their own businesses either by completing the scheme part time in parallel with their other studies or full time during a placement year. The package offered was worth £4500 per student and was offered in different ways by different universities. Some universities gave the students the money and expected the students to use that money to start and run the business with limited support from the university. Other universities like Staffordshire had a more structured approach. The £4500 is split into a £1500 grant at £125 a month and the remaining £3000 was used to provide a desk in one of the universities business start up villages rent free, a 15 week training programme covering all the key skills required to start a business including selling, accounts, marketing and business administration and regular access to a mentor. If the students fail to turn up to the training sessions without a valid reason then they can forfeit some of the £125 a month grant. In order to monitor what is happening and to give some targets for the students there are presentations at 6, 9 and 12 months where the best progress and presentation is awarded a prize. They have to also write a report on how they have progressed through the year and what they have learnt from the scheme. These presentations are attended by both the SPEED scheme staff and the relevant member of the placement team. Between 2006 and the end of 2008 90

Ian Sunley - Faculty of Computing, Engineering & Computing, Staffordshire University, Beaconside, STAFFORD, ST18 0AD, U.K.
g.i.sunley@staffs.ac.uk
Rachel Baker - Enterprise & Commercial Development, Staffordshire University, Blackheath Lane, STAFFORD, ST18 0AD, U.K.
r.a.baker@staffs.ac.uk

students created 37 businesses of which there are still 25 in existence.

In March 2009 the scheme needed new funding and a partnership between the University of Wolverhampton and Staffordshire University and supported by the remaining West Midlands universities received joint funding from HEIF and from ERDF, European Regional Development Fund, via AWM, Advantage West Midlands. The terms have changed slightly as no company can have funding for more than the equivalent of 2 students. And the emphasis has changed from providing the students with an entrepreneurial experience to one of creating new businesses capable of employing local workforce in the future years.

To join the scheme the students need to put forward a plan of what the company will do, how it will make a profit and where it sees its competition. This plan has to be presented to a governing board which includes the academic responsible for the placements and an entrepreneur who has started his own business as well as the staff running the scheme. The students must show that the idea has a good chance of success and they are totally committed to the venture. There has always been more applications than places and the scheme is fully booked for the next 12 months.

There are a wide range of businesses started including:

Film and Music Production companies, Web development companies, Games design companies, Pottery Designers, Sculptures, Media promoters, Graphic Artists.

Some industries are more represented than others partly due to the nature of the industries. For example we have a lot of Film productions companies Music producers and Web designers because the majority of the business in these areas is for short contracts with bigger companies.

IV. DEGREE OF SUCCESS

In the last 3 years 25 of the 37 companies have survived, some are just trading at a low level while the students complete their degree others are now growing very successfully. Here are some examples.

Company A.- A designer and maker of quirky sculptures which are made from wire and recycled materials and sell through Contemporary Craft galleries and Fairs. The artist says 'The main customers for my work are people looking for a handmade original piece of work who find the humour in my work appealing'

The company is now in its 3rd year of trading and is very successful with the artist's reputation becoming international.

Company B. - Providing user friendly business internet software, websites and solutions for small to medium sized businesses across the UK. The company was already working with well-known national clients within the first 12 months of trading. The company is now hiring sales staff to promote a new suite of business software it is releasing in the very near future.

Company C - A Signs and Graphics artist offering a mobile graphics design service for business. The company designs and installs graphics for vans, shop fronts, pub signs and pull up banners among other things and will do the installations at a time when the vehicle or premises are not in use. The company has become sufficiently popular that it is now looking to purchase a second vehicle and hire staff so that additional installations can be made.

Company D - A Video and Film production company which initially specialised in promotional videos of Professional bands and artists. They recently won awards for best sound and visual effects for the film [03.23.27] at the 2008 Young Independent Film and Television awards. The film was also shown in the short film corner at Cannes 2008. The company has also completed 2 films one for Dudley Performing Arts at the Birmingham Symphony Hall and another for Staffordshire Wildlife to celebrate 25 years of the Doxey Marshes nature reserve. They are now expanding into High Definition having recently updated their equipment.

Company E - An electronic pets sales company selling totally on line. The company started up as Adopt-A-Furby and specialised in the purchase, renovation and reselling of the Furby, an electronic interactive pet that was originally created by Tiger Electronics and Hasbro and was the hit toy in 1998. The current company specialises in all forms of electronic and technology toys and is expanding all the time importing many unusual toys from the far east. (e,g, a dinosaur that responds to its stomach being stroked)

Company F - A data recovery service for both private and business clients. The company can recover data from a whole range of devices from most major manufacturers using all the main operating systems. It was so successful that it was making sufficient profit to allow it to purchase additional diagnostic software within the 12 months placement period. Its clients now include both the police and the military and it is growing in strength all the time.

In order to keep the businesses functioning some of the students have elected to complete their awards part time so that they can maintain the business's momentum, in others where there is more than one student the students have agreed that one student should keep the business going and the other finish the degree and then vice versa.

It is noticeable that several of the businesses have moved into slightly different markets from those they started in. This is in order to follow the trends in the markets. Some companies have failed due to the speed of technology, where they had a good idea to start with but found that the change in the way technology was being used made their idea redundant. There was a company that was going to create a multimedia device that could handle CD's DVD's Videos and HD DVDs in the one device however a major manufacturer created a unit that did that only 6 months after they started. They could not compete.

V. HOW DOES IT FIT INTO AN ACADEMIC COURSE?

Each university has its own approach to how it marks a placement. At Staffordshire University the placement is from 36 to 48 weeks and is classified as a pass or a fail. The students get marks from the company that they are placed with and also from a university placement tutor who visits the student twice during the placement period. The student is also required to write a 3000 word report on the placement concentrating on what they have learnt from the experience.

The only difference with the SPEED scheme is that we do not have an employer so we use the presentations and the attendance during the year to produce the company mark. The students are still allocated an independent faculty

placement tutor and can use the same report that was written for the SPEED scheme as the placement report.

VI. CONCLUSIONS.

The scheme is very successful and has enabled many young people to try being their own boss in a relatively safe environment. The number of successful companies is better than the national average reported by the Times of 1 in 2 failing within the first 2 years. Many of those students whose initial companies have failed say that on graduation they will start a company again either on their own or with a group of friends.

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Universities, enterprises and local communities working together for Sustainable Development of Regions. A Case-study from Romania.

Dan Grigorescu
Prof. dr. University of Bucharest
Faculty of Geology, Bd. N. Balcescu 1, 01041 Bucharest, Romania
dangrig84@yahoo.com

- ***Sustainable development*** is a pattern of resource use that aims to meet human needs while preserving the environment so that these needs can be met not only in the present, but also for future generations to come (***Wikipedia).***
- ***Sustainable development*** is a concept of a great complexity which addresses equally to economic, social and environmental issues, the solutions requiring a closely integrated approach among these three domains.

Complexity of **Sustainable development demands a strong Driving Force** represented by a multi-actor consortium, with knowledgeable and skilled members, well motivated through the creativity and innovation of activities and the resulted benefits .

Universities are particularly well placed to represent such Driving Force

"Universities, with their triple roles as providers of the highest levels of education, advanced research and path-breaking innovation, are at the heart of Europe's knowledge triangle. They have the potential to be crucial drivers of Europe's ambition to be the world's leading knowledge-based economy and society." (***A new partnership for the modernization of universities: the EU Forum for University Business Dialogue, March 2009)***

- **Universities** are directly interested in developing close relations with the Realities (Economic, Social, Environmental and Cultural) around them. These relations allow universities to better respond to their mission of creating well trained specialists, knowledgeable and skilled in tackling concrete issues.
- **A Region** represents for universities a large field of operation where cross-disciplinary approaches can be developed not for the sick of experiments but for developing appropriate solutions for the communities' welfare.

Mutual benefits

- **For the Regions:**
  - Productive outcomes of the researches carried out by universities
  - Regional economic growth
  - Increase the region visibility and linking it to the World
  - Development of human capital
  - Driving social change
  - Ensure Environmental protection & Conservancy.

Mutual benefits

- **For universities**:
  - Closer link between Theoretic and Practical works (better trained graduates for the career) ,
  - Closer link between Education and Research
  - Increase capacity of intervening in solving concrete economic and social problems
  - Development of Cross-disciplinary approaches
  - New professions: manager of Sustainable development
  - Enhance Quality and Attractiveness of European Higher Education.

- **EU Commission regards *the Sustainable development of regions* as the base for building the future *Europe of Regions*.**

- This Policy is also reflected in the evolution of the EU Programs for Higher Education starting with **TEMPUS II ("Institution building phase")** ,continuing with **Erasmus Thematic Networks** – in which since 2004 **University-Enterprise cooperation** become a specific objective and since 2007 the **Lifelong Learning Program** includes under **ERASMUS-Multilateral Project *"Cooperation between Universities and Enterprises "***as a distinct Action .

Prerequisites for a productive intervention of universities in the Development of Regions

- Detailed knowledge on the Region: Nature, Culture, Social& Economical aspects, Administration
- Identification of the fields in which universities can intervene with most efficiency and best results
- Establishment of the university partnership and with the local stakeholders with clear distribution of tasks among the partners
- Finding the appropriate Organizational Frame of the Mega project and identification of Source(s) for Financing
- Project management plan with clear objectives and activities, timing and expected outputs.

A Case–Study : "Hateg Country" Region from Southern Transylvania, Romania.

GEOPARK as an appropriate frame for developing Sustainable development.

What is a GEOPARK ?

- A Geopark is a territory with well-defined limits and comprises a number of geological heritage sites of special scientific importance, rarity or beauty
- It may not be solely of geological significance but also of archaeological, ecological, historical or cultural value.

  The concept was launched by UNESCO in 1998 with the double aim:
  - A Geopark works for safeguarding the environment and for
  - Enhancing socio-economic regional development

Economic situation of the Hateg Country region

The region is strongly affected by economic recession due to the closing of coal mines and the reduction of metallurgic enterprises - the traditional sources of employment in the region .Unemployment reached 12% in 1995.

Needs analysis undertaken by the partner universities found that appropriate solutions for reducing the effects of the Economic recession are:

- Development of a sustainable agriculture
- Development of cultural and scientific tourism
- Reinforce the cultural/folkloric regional traditions
- Enhance Ecological Education, in primary and secondary schools from the region
- Offer the possibility of professional reconversion locally through ODL organized by the partner universities.

Weak points encountered through the Needs analysis

- Lack of knowledge and skills of the villagers for promoting sustainable agriculture
- Insufficiency of logistics and facilities for tourism
- Lack of experience of the villagers for hosting visitors
- Lack of Ecological Culture and of skills to intervene in prevention the deterioration of the Environment
- Strong decline of the traditional folkloric customs & habits and of the handicrafts.

Main Moments in the Creation of the Hateg Country Dinosaur Geopark

- 1998 –UNESCO launches the concept and conditions for becoming Geopark
- 2000 – Launching of the Project "Hateg Country Dinosaurs Geopark" financed through national research funds
- 2001 – Creation of the Association Hateg Country Dinosaurs Geopark
- 2004, November – National Accreditation through Governmental Decision
- 2005, March – Admission in the **European Geoparks Network**.

Partnership

- **Inter-University consortium**
  - University of Bucharest
  - University of Petrosani
  - University of Architecture from Bucharest
  - University of Agriculture from Timisoara
  - University "Babes-Bolyai" from Cluj
- **Inter-Communal Association for sustaining the Geopark**
  - Mayors of all the 11 localities from the Geopark area
  - Representatives of the County Council Hunedoara
  - Representatives of Universities from Bucharest and Petrosani
- **Enterprises**
  - SC Hidroconstructia Raul mare
  - SC Electrica,Hatef
  - Nabis SRL, Hateg
- **Local Communities**
  - Professors, teachers, priests, farmers.

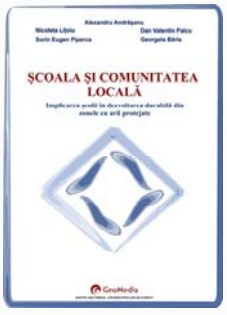
Achievements

- **For Community :**
  - **Social Cohesion :Bringing together a large community with different experiences but with the same main aim of contributing to the Sustainable development of the Hateg Country**
  - **Establishment and organization of touristic routes**
  - **Improvement of the infrastructure for tourism (pensions, services offered)**
  - **Ecological education in the schools from the region**
  - **Courses in Agriculture and Rural development**
  - **Creation of new jobs, related to the Administration and management of the Geoparc.**

Achievements

- **For Universities:**
  - **Summer schools**
  - **A large field for developing practical activities in continuation to the class activities**
  - **Development of research projects**
  - **Impact on the university curricula in the fields of Ecology, Architecture (Vernacular Architecture, Tourism)**
  - **Development of cross-disciplinary activities between different university specializations**
  - **A concrete satisfaction of contributing through concrete activities to the Sustainable development of a region.**

Training courses for teaching staff



1 Nature conservation
2 How to write and manage an educational project
3 Educational methods, tools and training packages for environmental education

Educational modules
Implementation of the EU acquis in Nature conservation

Expected impact of the project

Nature conservation

- Improvement of the geological sites organization and management in order to ensure their protection and valorization through tourism and education
- Promotion of interdisciplinarity in geological researches and practical methods of geoconservation
- Raise the awareness on the role that Geodiversity and Biodiversity ,tackled together in an integrated system of conservation and valorization ,can play in sustainable development of a region.

Economy

- Funds raising from tourism (pensions and services) and from connected activities (handicrafts, microproduction of merchantable objects related to the Geopark)
- Engender new work positions, especially in connection with site protection and development of the tourism in the region

Social and cultural

- Revitalization of the ethnologic and cultural identity of the Hateg Country
- Ensure the possibility of professional training / reconversion through courses offered by the university consortium involved in the project
- Strengthening the social cohesion among local communities, which are linked by a common interest in raising the socio-economic standard of the region.

Education, Social Capital and Social Inclusion

Colin Calleja, Michelle Attard Tonna

I. STRUCTURE OF PROJECTED PRESENTATION

- The generation of social capital, viewed in terms of social capacity building, can have a learning dimension and socially committed teachers, with strong critical consciousness, have an important part to play, in concert with others, in generating social capital among traditionally underprivileged social groups.
- The Let Me Learn project with its emphasis on social equity, social inclusion and teaching for diversity, is geared towards educating in a manner that contributes to social capacity building
- A critical review of current professional development processes in Malta – their strengths and limitations with regard to social capital and social empowerment.
- The need for teacher education in the context of generating Social Capital
- A professional learning process capitalizing on practitioners' experiences/realities, with special reference to knowledge of the social context of learning and possibilities for social empowerment
- Support mechanisms which contribute towards a socially-conscious and social capacity building approach that marks a proactive stance in Teacher Professional Development and Transformation
- Practitioners' voices:
    - Experiences and narratives of teachers witnessing their engagement in the learning process with special attention devoted to the social dimensions of teaching.
    - Case study of the impact of the learning process in classroom practice, which attaches importance to the social dimensions of learning.

A. Hypothesis

Or rather key question: Does the Let Me Learn Professional Learning Process afford teachers the space to critically deconstruct their own practice and think differently about their engagement in education with a view to providing a socially empowering education and fostering greater social capital?

B. Summarized Methodology

- Written narratives of teachers who participated in the Let Me Learn Professional Learning Process in the past two years. These narratives speak of the teachers' engagement in the learning process and their sensitization to specific issues in their classrooms and the surrounding social milieu. Sixty different narratives will be utilized.
- One detailed case study of the impact of the professional learning process in one classroom with regard to the social dimensions of learning and possibilities for social regeneration and capacity building.
- Trainers' field observation notes over the past two years.

Analysis of the data has followed the grounded theorizing approach thus building on a number of notions emerging from the data that help the authors to form a critique of current professional development discourses. This critique leads to a set of policy implications; it is also suggested that the Let Me Learn Professional Learning Process is adequately responding to the challenges encountered by teachers, especially in the social field.

The authors feel that they have collected sufficient material to be able to adequately discuss the issues raised and suggest a number of policy implications.

C. Probable conclusions

This study emphasizes the notion that the issues raised are dynamic and multi-level; hence conclusions of the study do not provide straightforward answers. Nevertheless the authors suggest a number of considerations that help to enhance the professional development experience:

- potential channels need to be sought in order to customize professional development programmes to the needs and realities of the professionals concerned, the social environment in which they work and the social groups to whom they cater.
- professional development processes built on teachers' experiences concerning the social dimension of learning are more likely to be effective in bringing about change in their social pedagogical approach than transmission approaches to training.
- teachers' experiences contributing to the generation of a social capital that can enrich both the profession and society at large.

Status of the work:
This study covers a two-year span with implications to future training provisions offered by the Let Me Learn Centre – Malta. This study is concluded but the analytic part is still in progress.

[1] Colin Calleja - Let Me Learn – Malta, University of Malta, Room 225, Faculty of Education, University of Malta. Msida. Malta, colin.calleja@um.edu.mt, Telephone: (+ 356) 23402554, Fax: (+356) 21 324803
Michelle Attard Tonna, Let Me Learn – Malta, Ministry of Education, Youth and Culture, Room 225, Faculty of Education, University of Malta. Msida. Malta, michelle.attardtonna@gmail.com, Telephone: (+ 356) 23402554, Fax: (+356) 21 324803

Career Office of the TEI of Crete: Twelve Years of Experience

Evangelia M. Simantiraki* and George M. Papadourakis**

Abstract - **The Career Office of the TEI of Crete, Greece, since its establishment in 1997, serves the students and graduates of the Institute by providing: information on job openings and academic programs, workshops, lectures, employer recruitment as well as professional advising and counseling. This paper presents the characteristics of the demand for these services during the past twelve years. Statistical data concerning the services will be outlined and the results of an external evaluation will be presented.**