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Creative Professionals for A World Of Complexity, Change and Competition

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Abstract

> For CEOs and their organizations, avoiding complexity is not an option — the choice comes in how they respond to it. Will they allow complexity to become a stifling force that slows responsiveness, overwhelms employees and customers, or threatens profits? Or do they have the creative leadership, customer relationships and operating dexterity to turn it into a true advantage? (Capitalising on complexity, IBM 2010)

A recent study by IBM reminds us of the professional world for which we are preparing graduates: it is one of unpredictability, constant change and competition. Simply having a good subject knowledge and practical experience is no longer sufficient to secure individual employment or corporate success. The ability to manage insecurity and change extends beyond the workplace into our everyday lives. In this world, generic, transferable skills such as communication, dispositions like resilience and motivation, and the ability to think creatively are paramount. So how well is Higher Education meeting these 21st century needs? This paper examines the findings of 3 complementary surveys conducted at the University of Surrey between November 2009 and December 2010, two as partners in the Creative Interventions Project, sponsored by the Higher Education Academy. The aim was to examine students' perceptions of what it means to be a creative professional, where and how they develop the competences they expect to help them succeed. Through on-line questionnaires and in-depth interview, the research investigated the nature of professional development acquired through the curriculum, through co-curricular and extra-curricular activities. The paper discusses findings against the IBM model of creative leadership for a complex, unpredictable, world. It finds considerable consistency but concludes that professional development arises from a mixture of lifewide experiences, albeit that tacit

learning is under-valued. The challenge is to provide developmental opportunities and formally recognise lifewide achievement.

Keywords: complexity, creative professionalism, lifewide learning, unpredictability

Introduction

> We are in tough economic times and in this climate, you need to stand out from the crowd. I'm not interested in any Steady Eddies or Cautious Carols. I'm looking for someone who's exceptional. (Lord Alan Sugar, 2010)

Viewers of the BBC's *The Apprentice*, will recognise the brief faced by those aspiring to work for the UK's renowned entrepreneur, Lord Alan Sugar. Although expressed less formally, it echoes the conclusions of a recent global survey of 1500 Chief Executive Officers:

> creativity trumps other leadership characteristics. Creative leaders are comfortable with ambiguity and experimentation. To connect with and inspire a new generation, they lead and interact in entirely new ways. (IBM 2010:23)

Individual and commercial success is seen to rely upon the ability to cope with change and uncertainty, to take risks and exercise creativity. This will not surprise those who have been advancing the agenda for creativity in higher education (e.g. Jackson, 2006, Amabile, 1996) and it is arguably the key to evolutionary survival. Here lies the first theme of this paper.

Whilst it is not suggested that the unique, or even principal, role of universities is to prepare students for the graduate market place (cf. Winnicott, 1971; Csikszentmihalyi, 1999), it would be naïve to ignore the expectation of many that a degree will enhance employability.

England's annual assessment, *Destinations of Leavers from Higher Education*, consistently places the University of Surrey in the top institutions for graduate

employment 6 months after graduation. Despite the economic downturn, 96.9% of Surrey's 2009 graduates were in employment at the time of the latest survey (HESA, 2010). The university prides itself on this record, which is largely attributed to its integrated programmes of professional training. This gives rise to a second theme. In 2005, following a successful bid to become a Centre for Excellence in Teaching and Learning, the Surrey Centre for Excellence in Professional Training and Education (SCEPTrE) was established. Since then, SCEPTrE has engaged in much pioneering research into the pedagogy of higher education. This paper draws together the findings of three studies of students' development as creative professionals and considers the extent to which Surrey is preparing graduates who meet the expectations of employers, as proposed in the IBM report.

The 21st century: professionalism in a period of uncertainty and flux

Our appreciation of the complexity brought about by globalization, and the professional competences necessary to succeed in this world has increased dramatically. Only six years ago, Yorke and Knight (2004) were differentiating between understanding, skills, efficacy skills and metacognitive skills; two years later, Knight (2006: 96-104) was referring to valued but elusive 'wicked competences' associated with professionalism. Since then, the Confederation for British Industry (CBI) has adopted the following definition of professional competence:

> A set of attributes, skills and knowledge that all labour market participants should possess to ensure they have the capacity of being effective in the workplace – to the benefit of themselves, their employer and the wider community.
>
> Skills include self-management, team working, business and customer awareness, problem solving, communication and literacy, application of numeracy, application of IT.
>
> Underpinning all of these attributes, the key foundation, must be a positive attitude: a 'can-do' approach, a readiness to take part and contribute, openness to new ideas and a drive to make these happen.
> (CBI, 2009:8)

So, knowledge and skills alone are insufficient for today's employers: they are seeking individuals who can communicate and work well with others as well as independently, but above all, they are looking for personal dispositions such as motivation, determination and adaptability.

Barnett (2003) pre-empted this awareness in his model of *knowing*, in order to *do*, and hence to *become*, a professional. These are ontological actions that go beyond the workplace: we are describing the very means of surviving in a fast and ever-changing world. The boundaries between once discrete aspects of life are being eroded as technological, economic and other developments alter the nature of work and the 'workplace'.

Jackson (2008) recognised this in his visualisation of life*wide* learning, learning beyond the formal curriculum, to include the co- and extra-curriculum. Unlike linear, life*long*, learning, lifewide experiences occur in any place and simultaneously. The notion is challenging: it requires an acceptance of non-traditional forms of learning, which threaten the academic *status quo*, and which are difficult to assess objectively. How much more contentious, then, is Barnett's subsequent extension of the concept to one of 'liquid learning'? He explains:

> Facilitating such extra-curricula learning, recognising it by some form of accreditation and opening spaces for systematic reflection on such lifewide learning are the makings of a new pedagogical function for the university. Now the university turns itself outwards and shifts its pedagogical purposes from a concern with the intellectual growth of the student to a concern with his/her lifewide development; his/ her total lifeworld indeed. (Barnett, 2010:10)

And yet, is this extended definition of personal and professional development so very different from IBM's model of contemporary leadership, which notes:

> In our past three global CEO studies, CEOs consistently said that coping with change was their most pressing challenge. In 2010, our conversations identified a new primary challenge: complexity. CEOs told us they operate in a world that is substantially more volatile, uncertain and complex. (IBM 2010:8)

IBM's conclusions on how best to deal with this world entail, for industry, the same sorts of shift in power and values as are affecting the universities. To avoid the stultifying effect of the 'complexity gap' between real and perceived complexity, IBM identifies 3 domains for which tomorrow's workers must be prepared. Table 1 reproduces these.

Table 1. Capitalising on complexity (source IBM 2010:65)

Embody creative leadership	Reinvent customer relationships	Build operational dexterity
• Embrace ambiguity • Take risks that disrupt legacy business models • Leapfrog beyond 'tried and true' management styles	• Honour your customers above all else • Use 2-way communications to sync with customers • Profit from the information explosion	• Simplify whenever possible • Manage systemic complexity • Promote a mindset of being fast and flexible • Be "glocal"

Domain 1, Creative leadership, calls for individual and organisational risk-taking and creativity; the second domain focuses on Communication skills and relationships between partners; domain 3, Operational dexterity, demands creative problem-solving and global awareness. Each element relies on individual and collective competence and a common objective.

Creativity is also essential. Space does not permit discussion here of the diverse definitions that creativity may encompass: interested readers are referred to e.g. Pope (2005). The question posed in this paper is, how well prepared are Surrey's graduates for the professional world of *complexity*?

Data sources

Under the University's Strategic Action Plan, SCEPTrE had been charged with developing the idea of a 'lifewide curriculum' so as to enhance our understanding of a complete education. Research data derived from three separate, but complementary, surveys conducted in SCEPTrE between November 2009 and December 2010. The

proposition was that students' perceptions provide valuable information with which to inform the opportunities offered throughout the undergraduate experience, whether within or beyond the curriculum, in order to maximise their preparation for the professional and personal challenges that await them in a complex world. Views were also canvassed on whether students would welcome recognition of their lifewide learning through some form of award.

The surveys were open to all relevant students, hence respondents were self-selecting: the potential for data bias must therefore be acknowledged. To mitigate against this, the three surveys focused on different groups of students, as described below. Consistency of views on the nature and development of professionalism was found.

By using a secure, anonymous, on-line questionnaire, we sought to maximize participation and to encourage openness. Respondents were invited to provide contact details if they were willing to participate in a one-to-one interview where their views would be explored further. Semi-structured interviews were recorded and fully transcribed, providing qualitative data to explain statistical evidence.

Survey 1 - Lifewide learning, Students from all disciplines (LL)

In November 2009, SCEPTrE carried out an on-line survey of Surrey students' learning through the curriculum (their programme of study), the co-curriculum (activities related to their subject of study) and their wider extra-curricular activities. They rated their perceived development in specific competences and dispositions on a scale 1 = very little, to 5 = very great development, and added narrative comments to explain their scores. This and the other two surveys used the Values Exchange software. This programme was developed by Professor David Seedhouse to "promote democracy, deliberation and tolerance" through a process of value-based decision making (see http://www.values-exchange.com/). Questionnaires were completed on-line on a secure site. Respondents can see an immediate analysis of the collective data, but the project manager has control over who may access individual data.

There were 309 respondents, comprising under- and post-graduates at all levels of study and from all 4 faculties, male and female, home and overseas students. 77% of

these students had undertaken or intended to undertake a professional placement year, indicating the value they attribute to practical workplace experience, hence giving a particular bias. The questionnaire was available for over two weekends and the intervening week, so as to capture a snap-shot of views.

Data were analysed statistically in order to identify trends; qualitative comments were collated and emergent themes identified. A full report of the study is available online (Willis 2010a). The main findings were that respondents perceived active listening skills to be paramount in their curricular domain, corresponding with the second strand of competences favoured in the IBM report; self-management and reflection emerged as the most important aids to professional development. Respondents were engaged in multiple extra- and co-curricular activities which they valued and enjoyed, but they failed to recognize the potential contribution of these activities to their professional development. This latter finding was significant and, if found in the other surveys, would be an area for further development with students, who might be under-selling themselves in the job market.

Survey 2 - Learning to become a creative professional, Creative Arts students

Another dimension of SCEPTrE's research related to the concept of creativity and its value to the individual and society identity, wellbeing and industrial (financial) success. As noted earlier, SCEPTrE's Director, Norman Jackson, had been a leading figure in the exploration of creativity in higher education. The IBM report had also identified the importance of creativity and the dispositions associated with it, giving this study practical validity.

SCEPTrE was a partner in a National Teaching Fellowship project, *Creative Interventions*, funded by the Higher Education Academy and led by University of the Arts (London), 2008-2010. In February 2010, SCEPTrE invited Creative Arts (CA) students (Dance and Culture, Music, Film and Theatre Studies and Guildford School of Acting) to complete an anonymous on-line survey. The aim was to determine where, in their lifewide experience, they develop their creativity, to explore individual perceptions of creativity, and to investigate aspects of professionlism. Findings would also feed into the Lifewide Learning Award being developed and tested through SCEPTrE (see

Jackson 2010). The questionnaire expanded the previous *Lifewide learning* survey, providing comparative data for common questions. Methodology and analysis were as before.

Initially, there were 40 respondents (a disappointing figure even for departments with an annual intake of less than 50 students). Nevertheless, data raised important questions about differences in perception of learning in formal and informal contexts, and SCEPTrE was awarded further HEA funding to conduct a parallel study, with non-Creative Arts students (see below). Additionally, the CA survey was reopened, leading to a total of 62 responses in December 2010. 10 of these respondents were selected for interview, balancing gender, discipline and level of study. Again, qualitative data were used to explain statistical evidence. The full report of this survey and a related presentation are available in Willis 2010b, 2010c and 2010d, and there are complementary chapters in SCEPTrE's e-book. The findings relating to professionalism once more demonstrated the importance of self-management, critical reflection and good communication skills. Adaptability and self-confidence ranked highly, suggesting a correlation with the competences cited in the IBM report.

Survey 3 - Developing and using your creativity, non-Creative Arts students

In November 2010, at the request of the University of the Arts team, the survey *Learning to become a creative professional* was adapted for non-Creative Arts (NCA) students. The majority of questions remained unchanged, permitting comparison with the two previous surveys. 206 responses were received over the 10-day data gathering period, representing the Faculties of Engineering and Physical Science (FEPS), Human and Medical Science (FHMS) and Management and Law (FML), and including non-Creative Arts subjects in the Faculty of Arts and Human Sciences (FAHS).
Some differences were found in these respondents' perceptions of creativity: they tended to be more dogmatic in their views than the creative arts students. The two groups agreed, though, on the importance of self-management and critical reflection and also in their undervaluing of the tacit learning afforded in extra-curricular contexts. Data for the 3 surveys therefore derive from a total of 577 self-selecting respondents. A common methodology and data analysis process was used for all, enabling comparison

between different groups of students, as well as maximizing the total, adding to the validity of the findings.

Professional development in 3 domains

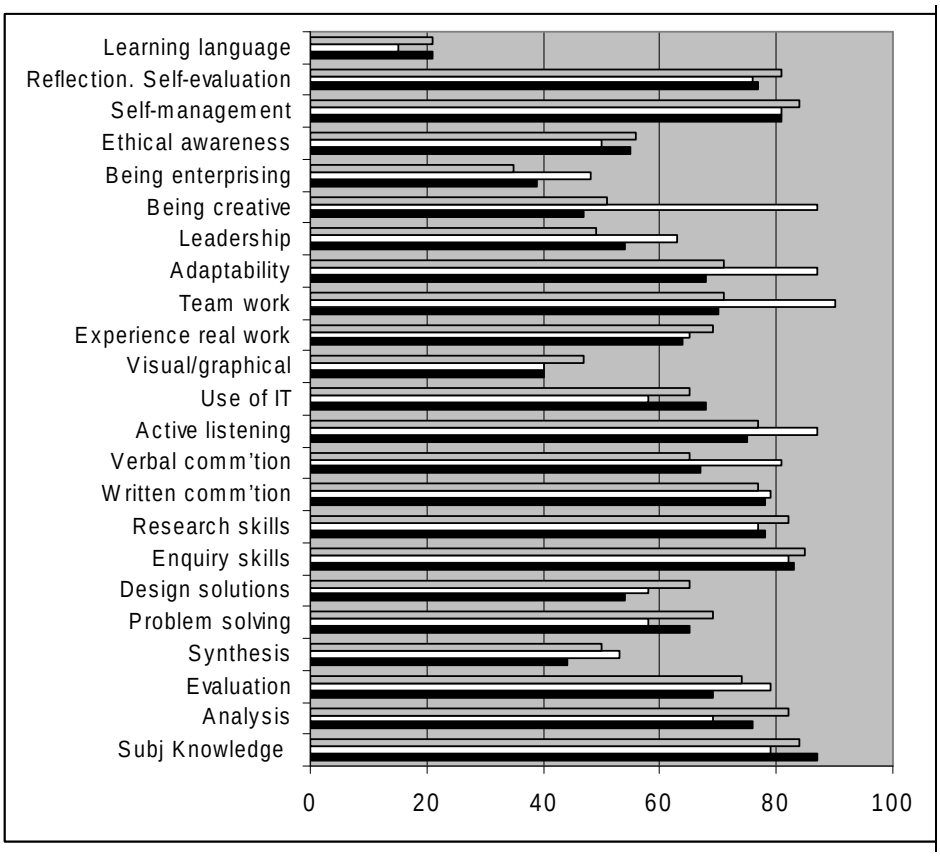
In each survey, respondents rated a series of capabilities and dispositions relevant to their programme of study, using the scale 1 = very little, to 5 = very great, perceived development. This methodology was able to identify trends, but can be given little thought by respondents. For this reason, they were asked to add explanatory comments, and follow-up interviews expanded perceptions. Respondents completed a similar exercise for their co-curricular activities, and again for extra-curricular activities. As noted, most questions were common to each survey.

The percentage of each group who awarded the top two scores for every factor was calculated and factors grouped as LL = Lifewide Learning, NCA = non-Creative Arts, CA = Creative Arts. Shading was used to distinguish between practical/work-related knowledge,, generic skills, personal management, metacognition and dispositions. Resultant data are too complex for inclusion in this text, but can be found at Appendix 1. In summary, the rainbow of colours in each domain shows that professional development occurs in each area, though in differing permutations. Scores indicate differences in perceived levels of development, with that in the formal curriculum tending to be more obvious to learners. We shall now explore the 3 domains.

Professional development through the programme of study

Figure 1 presents graphically data from the first four columns of Appendix 1, the curricular domain. , highlighting the relative significance of dimensions of development for each of the three groups.

Figure 1. Comparative development through PoS



Key: black = LLA, white = CA, grey = NCA.

There is relative agreement between groups that reflection, self-management, written communication, research/ enquiry skills and subject knowledge are well developed through the programme of study, but Creative Artists have considerably higher perceptions of development in the domains of creativity, adaptability, team work and active listening. This might confirm the stereotype of artists as being innovative (e.g. Greene, 2004). Creative Artists' comments emphasise their growth in confidence: e.g.

> *In many cases, it [the PoS] is taking me out of my comfort zone and pushing me to do things that I have never done before, which in turn is giving me drive and motivation to do well at new things and I am becoming a stronger and more mature person in my studies.* (Student A, Dance and Culture)

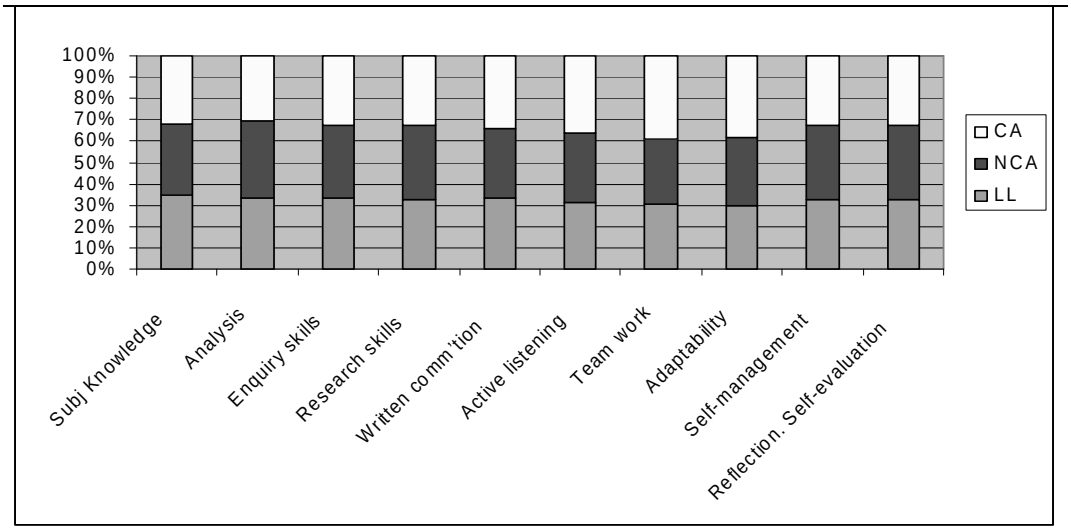
But they are not unique in this experience: similar examples abound in the other groups, for example:

> *It's letting me make my own decisions and be independent about my study as well as supporting me every step of the way. There's a great work ethic at Surrey which I haven't found at other universities.* (Student B, Sociology)

In terms of IBM's model, programmes of study appear to be giving students opportunities to take risks and develop important communication and interpersonal skills.

Figure 2 compares development of the highest scoring dimensions for this domain in the 3 surveys, revealing a relative balance in each.

Figure 2. Perceptions of greatest development through PoS

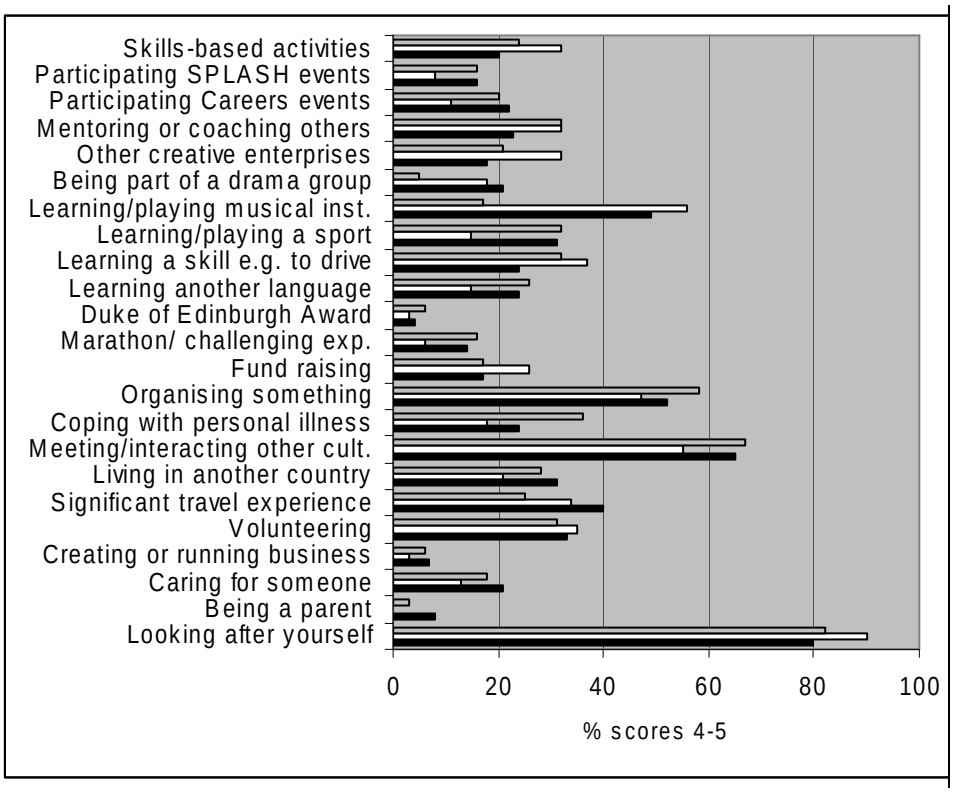


Professional development through the co-curriculum

Turning to students' perceptions of their development through the co-curriculum, Figure 3 reveals the three most significant dimensions are looking after yourself, meeting/ interacting with other cultures and organising an event. These entail a mixture of organisational and communication skills, plus an openness to new ideas.
However, when actual scores are compared, perceptions of learning in the informal, co-curricular setting, are qualitatively different from perceived learning in the formal context. We return to this issue later.

The dimensions of greatest disparity between the groups are those of performing in public and learning/playing an instrument, which are, as might be anticipated, more important to Creative Artists.

Figure 3. Development through co-curricular activities



Key: black = LLA, white = CA, grey = NCA.

Dimensions of least importance (being a parent, creating/running a business) are equally explicable, given the young age of most respondents and reminding us that scores record views at one point in time and cannot prejudge future values.

Nor can quantitative data do justice to the immense range and depth of co-curricular activities engaged in. These include teaching, coaching, mentoring, volunteering, performing in dance/music/theatre, software production, committee membership, travel, team membership, broadcasting, counselling and many more. Respondents have a keen appreciation of what is needed to succeed in the professional world, citing in particular good communication skills, organisation, self-confidence and motivation. This engineering student proposes:

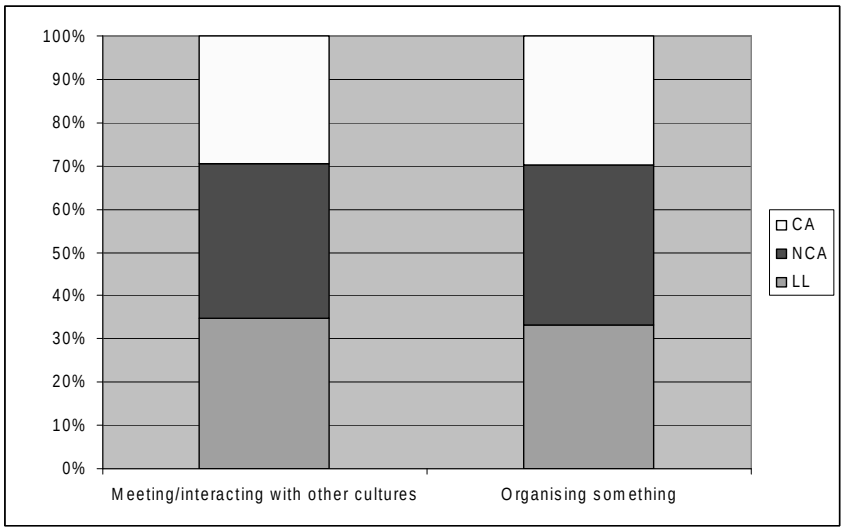
> *A creative yet pragmatic mind that allows me to assess a problem; then go about finding a feasible solution within any constraints specified. Good communication skills, that working alongside a mixed group of peers is helping to develop. A high level of self-motivation.* (Student C, Engineering)

Although from a creative arts background, the following student conveys a not dissimilar awareness:

> *I will need to be creative, assertive, technically minded, practical and good at working with a range of different kinds of people.* (Student D, Dance & Culture)

Perhaps these students illustrate why the university's graduates are so employable! Figure 4 shows the two top-scoring dimensions in this domain, which are equally balanced, adding validity to findings through consistency of perceptions.

Figure 4. Perceptions of greatest development through co-curriculum

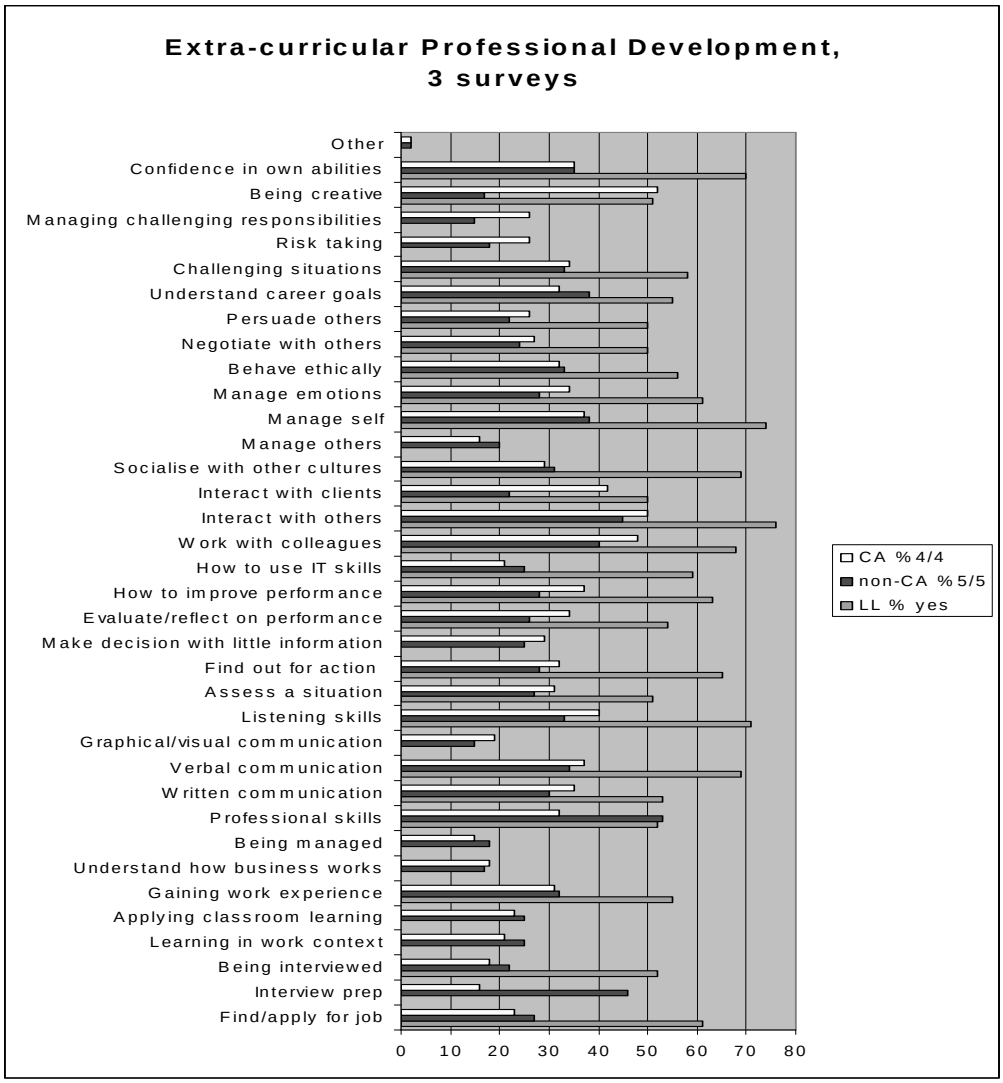


Professional development through extra-curricular activities

The third domain investigated is students' perceptions of their development through activities unrelated to their programme of study or chosen career. As noted above, comparison of responses is difficult in this domain, since different forms of scoring were used. Figure 5 provides the composite results, but Lifewide Learning results are distorted by representing all 'yeses' irrespective of depth – an inadvertent difference in

wording this question had crept in. Between the other respondents, working and interacting with others is most important, followed by increased self-confidence.

Figure 5. Development through extra-curricular activities

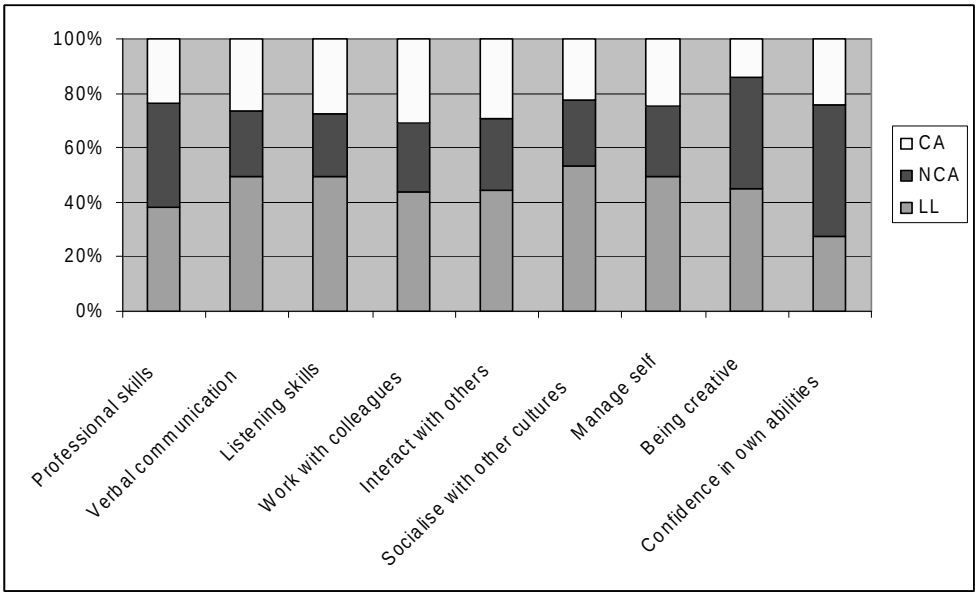


Qualitative data are more informative here. This FEPS respondent conveys the richness of many students' lives:

> *Everything I have learnt so far has helped me broaden my horizons. From philosophy to music theory and martial arts, it all helps shape us. I am who I am today because of the things I have done. What I will do in the future will depend on the things that I have done and not the things that I haven't done. Therefore it is all relevant. But that is only half of the answer to the question. I have practised guitar, karate, I have been part of a team in basketball in my home country and I have studied music theory, philosophy, German, Spanish, ancient Greek, history and sociology.*
> (Student E, FEPS)

Surely such attitudes are precisely those promoted in the IBM research?
Figure 6 collates the dimensions perceived as most significantly developed through extra-curricular activities, across domains. Proportions are more variable than in the comparable figures for curricular and co-curricular development, partly due to the differences in reporting, but also, it is suggested, because students under-value their development in informal learning contexts (see Willis 2010a).

Figure 6. Perceived greatest development through extra-curricular activities



Comparison with the IBM ideal of leadership

Dimensions of creativity

Respondents' perceptions of professional development, whether achieved through the curriculum, their co- or extra-curricular activities, suggest that a package of professionalism contributes to their employability as graduates. How does this fit with the IBM model of 'creative' leadership? Table 1 showed the 3 themes identified as essential to leadership in an era of complexity. To operationalise these, we propose that the competences and dispositions they imply include the following:

- *Embody creative leadership*
    - Ability to tolerate and manage change

    - Risk taking
    - Forward thinking
- *Re-invent customer relationships*
    - Customer relations management
    - Proactivity
    - Awareness local and global markets
- *Build operational dexterity*
    - Analytical skills
    - Problem-solving
    - Organisational skills
    - Reliability

If these competences/dispositions are compared with the dimensions assessed in the SCEPTrE surveys, a picture emerges which confirms that the university is preparing students for leadership in the 21st century. Table 2 aligns some of the Surrey dimensions with the broader IBM themes, to illustrate the match. It is not suggested that all students will have an identical experience, and indeed the research shows differences according to factors such as age and expectations; it is, though, proposed that the university's success in graduate employability is related to the embedding of experiences which enable students to develop such professional competences and dispositions.

Table 2. IBM and Surrey preparation for business leadership

IBM	Surrey	LL	NCA	CA
Tolerate and manage change	Adaptability	68	71	87
	Living in another country	38	28	31
	Meeting/interaction other cultures	65	67	55
Take risks	Risk taking		25	
	Marathon/challenging experience		16	6
	Taking decision with little information	16	25	29
Forward thinking	Being creative	47	51	87
Managing customer relations	Interact with others	76	45	50
	Interact with clients	50	22	42
	Negotiate with others	50	24	27
	Persuade others	50	22	26
Proactivity	Being enterprising	39	35	48
	Creating/running business	7	6	3
Awareness local and global markets	Experience real work	64	69	65
	Gaining work experience	55	32	31
	Understanding how business works		17	18
Analytical skills	Analysis	76	82	69
	Evaluation	69	74	79
	Synthesis	44	50	53
Problem-solving	Problem solving	65	69	58
	Design solutions	54	65	58
Organisational skills	Self-management	81	84	81
	Organising something	52	58	47
Reliability	Professional skills	52	53	32

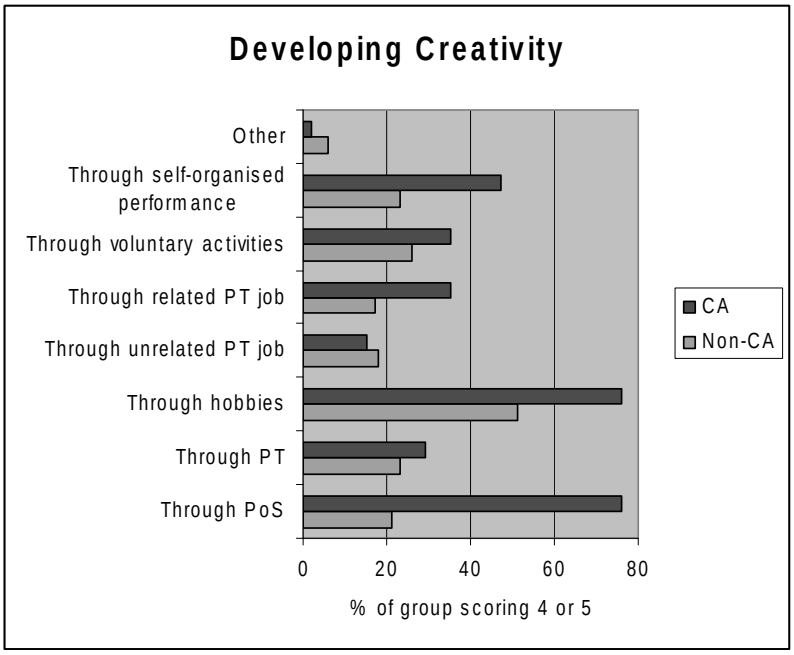
Domains of creative development

The Creative Arts and non-Creative Arts surveys asked where respondents felt best able to develop their creativity. Figure 7 contains the results. The first observation is that the former group generally perceived much more development across their lives, unrelated work being the main exception.

It is also clear that these students engage in extra-curricular activities that are closely related to their professional interests. This is the domain in which non-Creative Artists feel they are most creative.

Understandably given their applied nature, Creative Artists feel their programmes of study are highly significant, but does non-Creative Artists' low score represent reality or a misperception of the creative opportunities offered in their programmes? Some of their comments have already contradicted this low score and shown a broader appreciation of what creativity actually means.

Figure 7. Domains of perceived creative development



A brief discussion of qualitative evidence from these two studies follows.

Student perceptions of creativity

Students' notions of creativity reflect common themes found in the literature (e.g. Amabile, 1996) and correlate with the IBM model. Those cited most frequently are:

- Originality, flair
- Inspiring or provoking others
- Coping with different situations
- Quick/lateral thinking
- Open-mindedness, willingness to compromise
- Responsibility

- Self-confidence
- Risk-taking
- Sensitivity
- Being organised
- Cultural awareness
- Expression
- Self-motivation
- Self-discipline
- Technical ability
- Integrity
- Dedication
- Ambition
- Resilience

Respondents give insight into their professional use of creativity, surely epitomising the qualities and dispositions of leaders envisaged in the IBM study e.g.

> *The most important is being open-minded, and ongoing professional development in the disciplinary field. You need to face the problems of our century and not only the business side, hence a lot of creativity is needed to achieve both sustainability and good business.* (Student G, FEPS)

> *… those which relate to interacting with clients, building relationships and networking in general. Being creative means taking the initiative when interacting with people and trying to have a positive influence on their day to day working life.* (Student H, FML)

> *Being creative is thinking beyond what is expected of you, coming up with the most original ideas however being able to relate this to current culture trends. I think research, practice, listening and looking. The attitude you need is determination yet you need to work with others and create a fun environment. Qualities are manners and courteousness for this job.* (Student I, Theatre Studies)

> *You have to be willing to try and take a fall as it rarely happens first time round. You have to be determined*. (Student J, Dance and Culture)

> *Creativity is required in every part of life. New electronic devices require someone being creative in the way they are conceived, problem solved, and put onto the market. I think people need to be creative in the way of looking at what people have done before and instead of doing it slightly better, completely turning it on its head and making something radically different with the knowledge that is has been passed down by those who came before.* (Student K, FEPS)

Comments are from Creative and non-Creative Arts, yet all show a keen appreciation of what is required to succeed professionally. There was general consensus that creativity is transferrable, e.g.

> *(skills) are definitely transferable to other contexts and industries e.g. creativity in motivating or inspiring your employees or creativity in approaching your clients or any stakeholders by developing different ways of communicating can bring success in any field, whether it is business management, events management, teaching pupils or coaching a sports team*. (Student L, FML)

Memorably, this comment:

> *In a way you have to be creative in how you transfer such creativity for it to be successful.* (Student M, Music)

The depth of understanding revealed through their narrative responses is striking, contrary to their low rating of professional development in co- and especially extra-curricular activities. Evidence suggests a lack of awareness and appreciation of tacit learning, rather than a dearth of learning in these contexts. What conclusions can we draw from this comparison with the IBM ideal of creative professionals?

Concluding remarks

The question posed was how well the University of Surrey prepares its students for creative leadership in the complex world proposed by the IBM research. The university's students demonstrably develop the desired competences and qualities, but development derives not simply from the formal curriculum but also from lifewide

experiences. It is this package which seems to make the university's graduates so employable.

The continuing challenge is to maximise opportunities for professional development in and beyond the curriculum, and to recognise – assess even – intangible achievements. This is a message which is not confined to one institution in one country: we have been dealing with fundamental human attributes, which stretch beyond geographical borders. We offer a model which is transferable to other nations, where it may be adapted to meet local needs.

Nor is it a message for Higher Education alone. Since first writing this paper, the UK has witnessed serious civil unrest (August 2011), fundamental triggers of which relate to low self-esteem and failure to build on individual competences at a time of mass unemployment. The lessons of lifewide learning, critical reflection on experiences and competences that go beyond the formal curriculum, offers an important model for those working with disaffected communities.

Acknowledgements

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Appendix 1 Professional development in 3 domains

Development through curriculum				Development through co- and extra-curriculum							
Dimension	LL 306	NCA 206	CA 62	Dimension	LL 306	NCA 206	CA 62	Dimension	LL 306	NCA 206	CA 62
Subj Knowledge	87	84	79	Looking after yourself	80	82	90	Find/apply for job	61	27	23
Analysis	76	82	69	Being parent	8	3	0	Interview prep		46	16
Evaluation	69	74	79	Caring for someone	21	18	13	Being interviewed	52	22	18
Synthesis	44	50	53	Job related career		29	37	Learning in work context		25	21
Problem solving	65	69	58	Participating PT		31	29	Applying classroom learning		25	23
Design solutions	54	65	58	Creating/ running busn's	7	6	3	Gaining work experience	55	32	31
Enquiry skills	83	85	82	Volunteering	33	31	35	Understand business works		17	18
Research skills	78	82	77	Significant travel exp	40	25	34	Being managed		18	15
Written communic.	78	77	79	Living in another country	31	28	21	Professional skills	52	53	32
Verbal communic.	67	65	81	Other cultures	65	67	55	Written communication	53	30	35
Active listening	75	77	87	Coping personal illness	24	36	18	Verbal communication	69	34	37
Use of IT	68	65	58	Organising something	52	58	47	Graphical/visual communic		15	19
Visual/graphical	40	47	40	Fund raising	17	17	26	Listening skills	71	33	40
Other communication			8	Challenging experience	14	16	6	Assess situation	51	27	31
Experience real work	64	69	65	Duke of Edinburgh Award	4	6	3	Find out for action	65	28	32
Team work	70	71	90	Learning another lang	24	26	15	Decisions with little info.		25	29
Adaptability	68	71	87	Learning a skill e.g. drive	24	32	37	Evaluate/reflect on perf	54	26	34
Leadership	54	49	63	Performing public		25	69	Improving performance	63	28	37
Being creative	47	51	87	Learning/playing sport	31	32	15	How to use IT skills	59	25	21
Being enterprising	39	35	48	Musical instrument	49	17	56	Work with colleagues	68	40	48
Ethical awareness	55	56	50	Part of drama group	21	5	18	Interact with others	76	45	50
Self-management	81	84	81	Other creative enterprises	18	21	32	Interact with clients	50	22	42
Reflection, self-eval'tion	77	81	76	Member student society		41	45	Socialise with other cultures	69	31	29
Learning language	21	21	15	Mentoring/coaching	23	32	32	Manage others		20	16
				Skills-based USSU actis.	33	25	32	Manage self	74	38	37
				Careers events	22	20	11	Manage emotions	61	28	34
				SPLASH events	16	16	8	Behave ethically	56	33	32
				Other skills activities	20	24	32	Negotiate with others	50	24	27
								Persuade others	50	22	26
								Understand career goals	40	55	38
								Challenging situations		28	58
								Risk taking		25	
								Managing challenging resps	20		15
								Being creative	55	51	17
								Confidence own abilities	40	70	35

Key: practical/work-related knowledge (yellow), generic skills (blue), personal management (pink), metacognition (green) and dispositions (white).