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MAPPING PROVISION OF ENTERPRISE EDUCATION AND SUPPORT FOR ENTREPRENEURSHIP IN ENGLAND'S HIGHER EDUCATION INSTITUTIONS¹

By

Prof Paul Hannon, Dr Jonathan M. Scott, Cindy Millman & Srikanth Reddy

Prof Paul Hannon

National Council for Graduate Entrepreneurship, 3 Priestley Wharf, Holt Street, Birmingham B7 4BN

Dr Jonathan M. Scott

*Teesside University Business School, Southfield Road, Middlesbrough, TS1 3BA
(from September 2009)*

Cindy Millman & Srikanth Reddy

University of Central England, Perry Barr, Birmingham, B42 2SU

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ABSTRACT

The aim of this paper is to provide a comprehensive overview of the state of support for enterprise and entrepreneurship education within England's Higher Education Institutions (HEIs). The paper is based upon the National Council for Graduate Entrepreneurship (NCGE) Mapping Study of this activity. Research commissioned by NCGE (NCGE 2004; Hannon, 2005) has shown that there is a growing knowledge base about enterprise education but less so concerning the provision for student enterprise and graduate entrepreneurship. There has been no recent study that has comprehensively mapped enterprise education activity in all higher education institutions across England. Institutional contacts in 94% of all the HEIs for this study entered data into an online institutional mapping template containing questions on modules/courses, non-accredited support and other institutional characteristics. The researchers maintained regular telephone contact and made personal visits to maximise data entry and to provide support where needed. This approach has led to the collection of a unique and robust data set that has been thoroughly and empirically analysed using SPSS.

The paper presents a national overview and highlights selected regional variations in enterprise education and non-accredited entrepreneurship support. This includes: current and planned course provision over time; student profiles and targets; primary learning outcomes; non-accredited provision and student engagement; primary funding sources; and the development of a range of institutional characteristics conducive to supporting student enterprise and graduate entrepreneurship. The findings from the mapping study illuminate the current HE landscape of support for enterprise and entrepreneurship thereby providing HEIs and educators with a valuable national resource as well as informing other key stakeholders – RDAs and central government – of the scope and scale of the contribution that HEIs offer to regional economic and social agendas. From such a unique evidence base more informed decisions can be taken in considering effective mechanisms for the future growth and development of HEI contributions. This paper offers the findings from a current comprehensive dataset on the HE provision of enterprise and entrepreneurship education in England. With 94% of the HEIs in the study providing data online the study has also created a national database that can be a platform for sharing knowledge and experience across the community. Furthermore conducting a repeat online study on an annual basis will provide valuable time series data. The study findings will help shape the future environment for student enterprise and graduate entrepreneurship across England.

Key Words: entrepreneurship education, student enterprise, graduate entrepreneurship, Universities, education/entrepreneurship policy

1. INTRODUCTION

There continues to be a growing interest in enterprise and entrepreneurship education within HEIs. This interest has emerged from educators, from students, from employers and from senior institutional management. Furthermore, there remains a strong policy interest from central UK government, particularly from the Treasury, the Small Business Service, the Dept. of Culture, Media and Sport, and the Dept. for Education and Skills; as well as from England's Regional Development Agencies, the Welsh Assembly Government and Scottish Executive.

The growth in activity within HEIs in exploiting such interests has been driven by both internal and external opportunities and pressures. For example, the increasingly competitive HE sector places pressure on institutions and faculties to maintain and grow revenue streams; the market positioning of institutions demands relevance to an emerging consumer market as student fees are introduced; changing government policy initiatives have created new funding streams into HEIs for enterprise and innovation related activities; the regionalisation of England is influencing the relationships between RDAs and their regional networks of HEIs.

The result over the past decade in England has been a significant increase in the supply of enterprise and entrepreneurship support for students and graduates. The growth in provision has been broad in scope and includes credit-bearing and non-credit-bearing activities and is accompanied by 'hard' and 'soft' infrastructural changes: the creation of physical centres and spaces for enterprise; the re-orientation of institutional policies and plans; and, the development of new faculty and administrative posts.

Furthermore, the scale of engagement by staff and students has also grown as opportunities across wide ranging activities are provided. Quantitatively this is evidenced in institutional reporting against specific actions and targets laid out in specific funding mechanisms such as Science Enterprise Challenge (SEC) and Higher Education Innovation Funds (HEIF). However, these data are provided purposefully for the recording of achievements against targets for drawing down and justifying fund provisions. They do not necessarily illuminate the full scope of provision.

From a national policy perspective it has proved difficult to present any meaningful and comprehensive overview of the overall patterns of growth in provision, the detail of its nature, or the nature of student engagement. There is inconsistency in the type of data collected at the institutional and regional levels that would provide the basis for any such meaningful overview. Furthermore, and in general, the data that are collected tend to focus on activities and outputs. These data are limiting from an educational perspective where for instance there is not always explicit clarity about the learning outcomes from course provision.

Overall, the current state of national data in England has been insufficiently consistent and comprehensive to provide a sound platform upon which specific questions can be considered. For example:

- What should be the nature of future curricula development in enterprise and entrepreneurship education at HEIs, based upon current experiences?
- How does existing course provision contribute to the development of entrepreneurial learning outcomes, and what might constitute good practice?
- What is the nature of the engagement by student types and by faculties/centres?
- What is the overall scale and scope of provision and engagement and how is this changing?

In beginning to address such questions the National Council for Graduate Entrepreneurship (NCGE), as a starting point in developing an understanding about enterprise and entrepreneurship support provision and engagement across England's HEIs, commissioned a study to map the scale and scope of current and planned activity. The aim of this paper is to provide a comprehensive overview of the state of support for enterprise and entrepreneurship education within England's Higher Education Institutions (HEIs) based upon this Mapping Study.

Due to insufficient space in this paper, the emphasis is placed on presenting a national overview with selected highlights of regional variations in enterprise education and non-accredited entrepreneurship support. This includes: current and planned course provision over time; student profiles and targets; primary learning outcomes; non-accredited provision and student engagement; primary funding sources; and the development of a range of institutional characteristics conducive to supporting student enterprise and graduate entrepreneurship. Further papers will illustrate regional analyses and other aspects emerging from the analyses of the mapping data. Summary regional reports can be downloaded at <http://www.ncge.org.uk/imreports/index.htm>.

This paper offers the findings from a unique and current comprehensive dataset on the HE provision of enterprise and entrepreneurship education in England. With 94% of the HEIs in the study providing data online the study has also created a national database that can be a platform for sharing knowledge and experience across the community. Furthermore conducting a repeat online study on an annual basis will provide valuable time series data. The study findings will help shape the future environment for student enterprise and graduate entrepreneurship across England.

This introductory section has provided the rationale for the paper. Section 2 is a review the literature in relation to the study, Section 3 outlines the methodology adopted, Section 4 provides full analysis of the reported data; Section 5 offers conclusions; and Section 6 presents a summary and next steps.

2. LITERATURE REVIEW

Much has been written about entrepreneurship and a growing literature is emerging in entrepreneurship education and graduate entrepreneurship. Recent reviews include Hannon (2005a; 2005b) and Pittaway and Cope (2005). Past reviews include Gorman et al (1997), and a decade earlier Dainow (1986). There is not the space within this paper to provide commentary on these reviews and it is not the purpose of this paper to add to or further explore the extant knowledge base. More so the focus for this paper is to build upon the existing understanding of the mapping data of provision and engagement in support for student enterprise and graduate entrepreneurship. In this context there are few relevant studies that have comprehensively mapped entrepreneurship education and support in Higher Education.

The NCGE commissioned report (ISBA 2004) and subsequent publications (Hannon 2005a; 2005b) have emphasised the need for a more comprehensive national dataset to provide a robust evidence base from which to inform and influence policy and practice. The value of engaging in regular and consistent data collection to provide time series data has already been demonstrated. In the US, through the commitment of the Kauffman Foundation to supporting the George Washington University and the University of Illinois in developing and undertaking ongoing surveys and thereby enabling 'state of the nation' type reports of entrepreneurship education across the US. See, for example, Solomon et al (2002) and earlier (1986; 1988; 1991); McMullan and Long (1987); or the tracking of entrepreneurship chairs by Katz (1994); or Plaschka and Welch (1990) review of curricula designs; or Solomon et al (1994) historical review of teaching pedagogies; and Vesper's early work in the mid 1980s (Vesper 1986, 1987; Vesper & McMullan 1988) and later in the 1990s (Vesper and Gartner 1997). Notable examples from the UK include Price et al (2004); Levie (1999).

In the UK, NCGE was able to act upon the recommendations in the 2004 report and resource the piloting of a new approach to building a national dataset that would illuminate the HE landscape and be the catalyst for the creation of an online national database for raising awareness of the scale and scope of practice across the HE community in England. Section 3 now explores the approach in more detail.

3. METHODOLOGY AND APPROACH

NCGE agreed with all English RDAs to compile regional maps of HE provision supporting student enterprise and graduate entrepreneurship. To achieve this aim, NCGE commissioned a team of researchers to gather and analyse the information for presentation to the RDAs.

NCGE's initial design of the survey instrument was influenced by a workshop with experts held in Birmingham, UK, access to the Kauffman Foundation survey instruments, and a review of earlier UK reports and studies (Price et al., 2004; Levie, 1999). The instrument was subsequently piloted at 2 HEIs. The survey aimed to capture data in the academic year 2005-06. In addition to capturing basic data concerning the location and size of the institution, the general structure of the main survey instrument examined three key areas:

1. all credit bearing provision relating to enterprise and entrepreneurship education at all levels and modes of delivery. This section further included data collection on the first registration of the provision, numbers of participating students and their profiles, the primary learning outcomes, the leading faculty or centre, and the primary target participants. Further data were sought about the teaching resources engaged in the delivering of the identified provision. The same data fields were used to collect data regards any planned credit bearing provision.
2. all non credit bearing provision relating to enterprise and entrepreneurship education and support. This section listed 24 categories of provision and collected data against each category for the year started, numbers of students participating, the frequency of the activity, the target participants, the leading faculty or centre, and the primary funding sources.
3. the third section collected data against 28 institutional characteristics that are indicative of support for enterprise and entrepreneurship. The instrument sought to clarify if, or not, each institution possessed any of the listed characteristics.

NCGE made initial visits to many HEIs in the regions of England to brief key contacts on the mapping exercise and to ensure participation. In addition, a number of RDA meetings took place to ensure each region was knowledgeable about what was going on, when, and how. Most HEIs in regions, apart from London and the South East due to the number of institutions, were visited; those that were not visited received a telephone call from an NCGE Director to provide the same information.

Although in the early stage of the study a paper-based template was used, an online mapping template was soon developed and tested which enabled key contacts in HEIs to directly enter the data in the three areas identified above. The initial briefing meeting or telephone call from NCGE was followed by an email providing details of the online template, a URL link and a unique institutional password to ensure integrity of the data. A copy of the online template can be viewed at <http://www.ncge.org.uk/im/register.htm>.

The key contacts within HEIs managed the completion of their institution's template, collected data and entered the data on the online template. NCGE and the research team maintained regular telephone contact to ensure completion and to provide support (including, for example, answering questions and resolving any issues that arose). In most cases, contacts were able to complete the online template. However, in some cases, visits were made by the researchers to interview the contacts where HEIs had limited resource. An online guide was also provided.

The benefit to the research team of the online mapping template was that it removed the normal need to enter data submitted by all respondents, thus reducing lead times in starting analysis of the information. As a result, it was possible to achieve returns from 123 of 131 English HEIs in the study (a 94% response rate). All survey data were exported from the online template into SPSS for analyses.

The data from which the findings are presented in this paper are all self-reported. Key contacts have utilised existing data where available, have sought additional supplementary data where needed from centralised units such as Academic Registries, and in larger institutions have worked with faculty colleagues to provide a full picture from across the campus. The research team continuously monitored template entries as well as reviewing HEIs' websites and followed up within individual contacts if there were any potential anomalies. The dataset thereby represents the most recent and accurate data available.

4. RESULTS

Table 1 provides an overview of the HE student population for the study. Of this population an overall 7% of all HE students are reported engaged in some form of enterprise activity at an HEI in England. Of this, two-thirds are engaged in non-credit-bearing 'extra-curricula' provision.

Table 1: Student Engagement in Enterprise

	England	%
Number of Participating HEIs:	123/131	94%
Students in HE	1,898,537	100%
Students in Enterprise	131,923	7%

Below, the presentation of the data is structured to match the layout of the online mapping template and will detail firstly data relating to current credit-bearing provision; secondly, data relating to future planned credit-bearing provision; thirdly, data relating to non-credit-bearing provision; and fourthly, data relating to broader institutional characteristics.

As well as national average data, selected data relating the 9 regions of England are presented. The following abbreviations are used: North East (NE); North West (NW); Yorkshire and Humberside (YH); East Midlands (EM); West Midlands (WM); East of England (EE); South East (SE); South West (SW); London (LDN).

4.1 Current Enterprise Provision

HEIs reported a total of 889 enterprise programmes/modules offered across the regions of England in 2005-06. Figure 1(a) shows the % regional distribution of these programmes and modules.

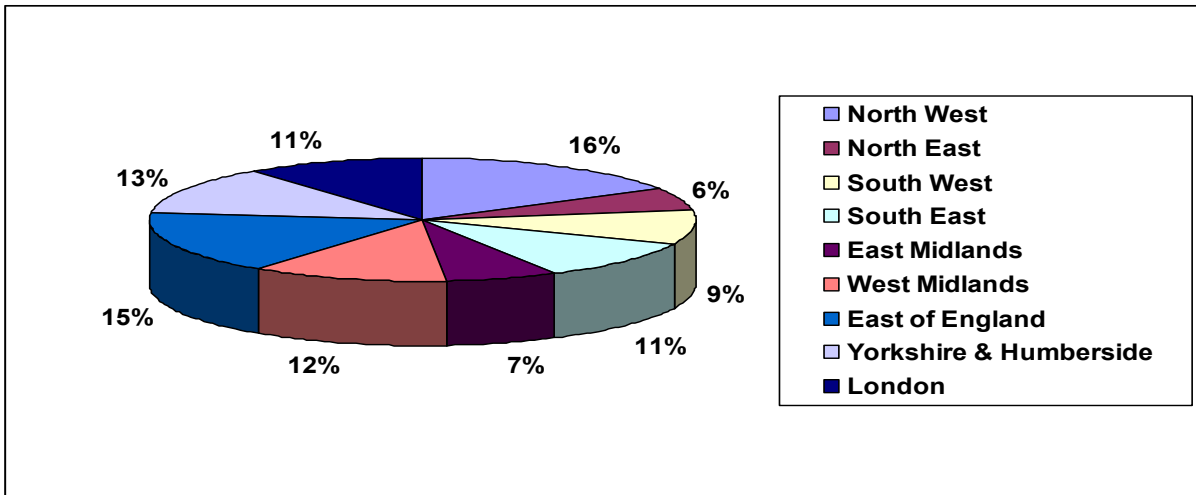


Figure 1(a): Current programmes/modules in each region of England (%)

The data relating to this total current provision are now presented according to specific categories of data. Firstly, the level of provision as categorised by undergraduate and postgraduate levels; secondly, by the leading faculty or centre; thirdly, by the primary target participants; fourthly, by the primary learning outcomes; fifthly, by student engagement; sixthly, by student profile; and finally by the growth of provision over time.

4.1.1 Undergraduate (UG): Postgraduate (PG)

Figure 1(b) shows that 64% of all provision is reported at the UG level. Among all 889 programmes/modules which are currently offered in HEIs in England, almost two thirds of the enterprise education activities were modules, with 43% at UG level and 17% at PG level. Full programmes were at a lower level in comparison, with 21% at UG level, and 16% at PG level. In addition, about 3% were other vocational programmes/modules. Variations in each region between UG and PG were quite marked. WM has a low level of full PG programmes and there is major potential for the introduction of PG enterprise programmes. Both LDN and the EE have significant regional strength in PG enterprise provision.

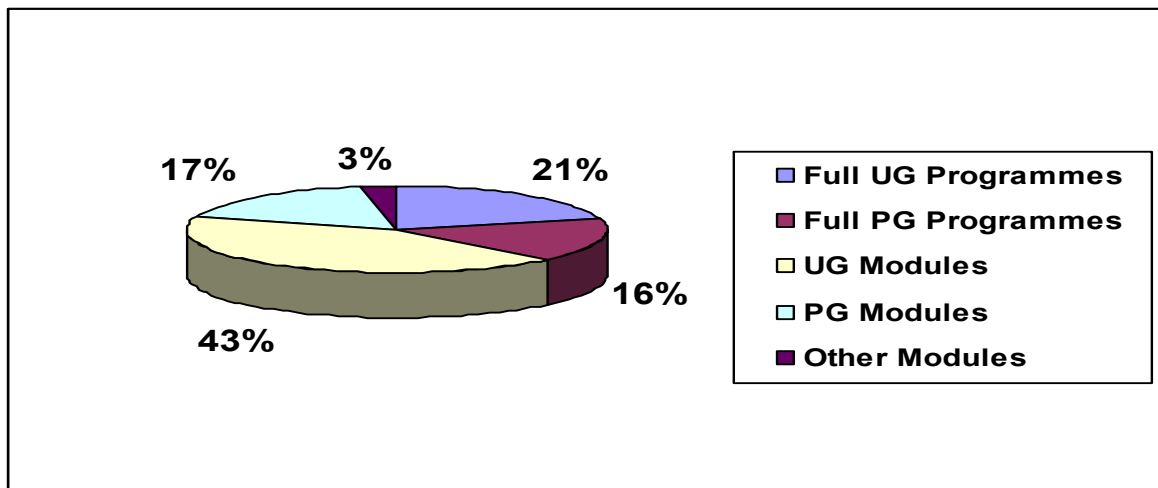


Figure 1(b): Current programmes/modules by level and mode (%)

4.1.2 Leading Faculties/Schools

Business Schools (64%) are the predominant leading centres of current enterprise and entrepreneurship provision in England (Fig. 2), followed by Engineering (9%) and Art & Design (8%). There are no reported programmes/modules currently offered by Law faculties at all.

Again the data reported significant variations regionally. Regions such as SW, YH, NW, NE and LDN are below the national averages in provision by Business Schools - while 90% of current provision in EE is from Business Schools. Conversely, LDN is twice the national average in provision by Engineering faculties; there are strengths in Art and Design in the NW and SE; in the NE and YH Computer Science is double the national average; EM has strength in faculties in Pure Sciences; LDN and SE both have higher than average provision by Medicine & Health faculties.

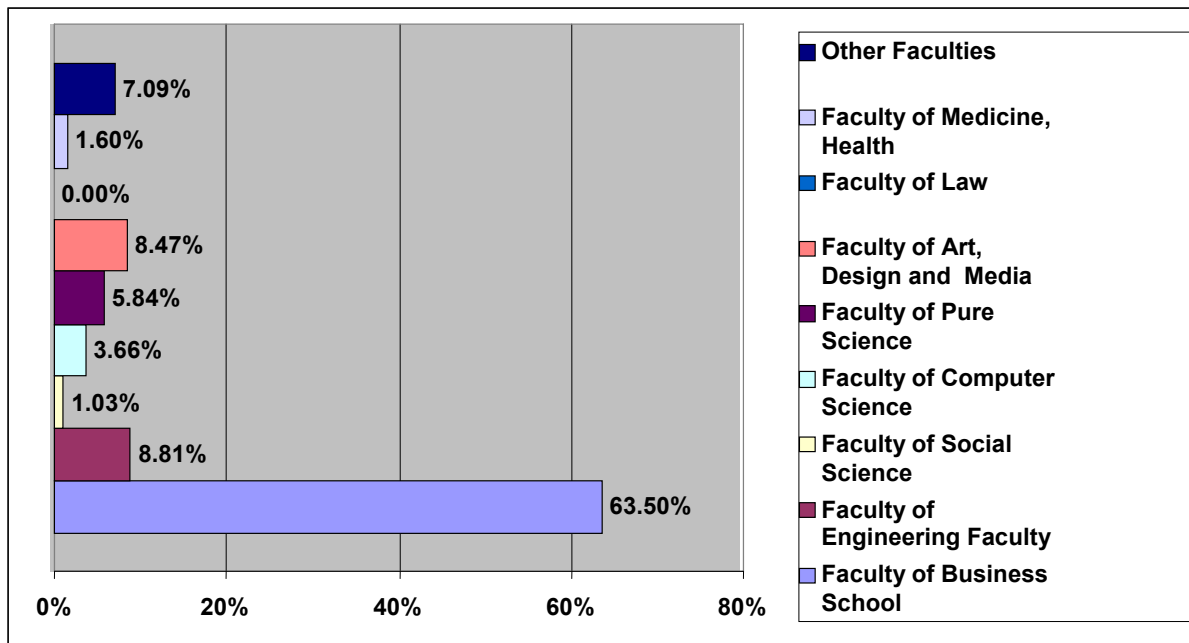


Figure 2: Leading centres for current provision in the regions of England (%)

4.1.3 Primary Target Participants

Figure 3 presents the data reported for target participants of current provision. Current provision targets students from one specific faculty (44%) and UG students (21%). Nationally, there is a very low level of provision targeted at areas such as Social Enterprise or Creative Enterprise or at female or international students. Current provision targeting UG students is at twice the level of those targeted at PG students. Targeting students at one faculty is a dominant response in most regions. Again the data varies across regions.

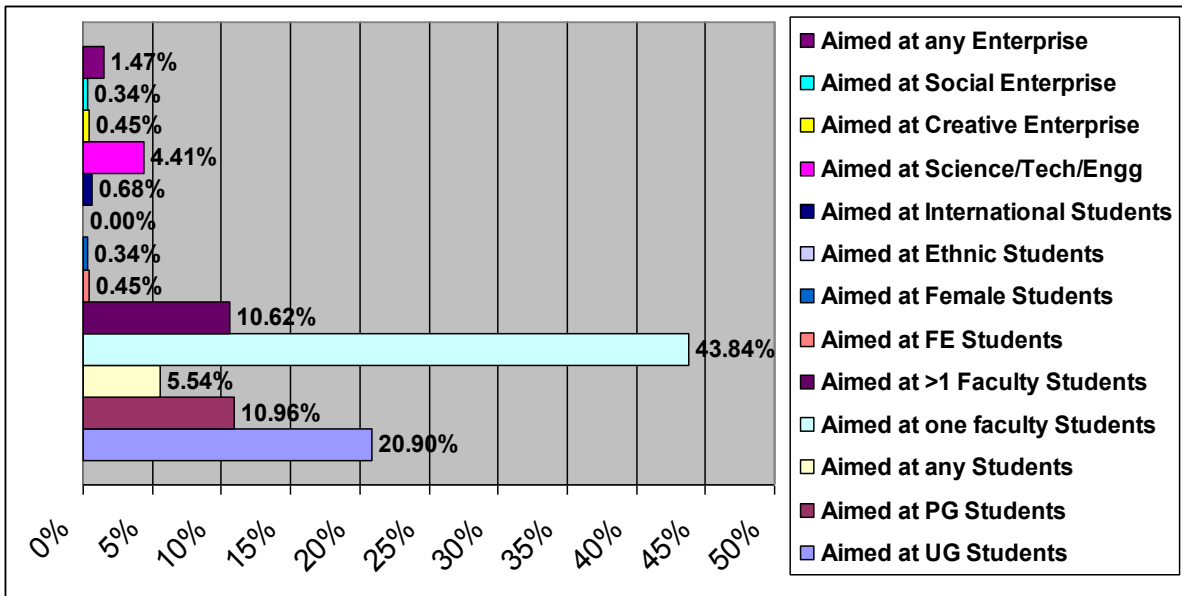


Figure 3: Targeted participants for current programmes (%)

4.1.4 Primary Learning Outcomes

A list of 13 Learning Outcomes (see Table 3 in the Annex) was defined by NCGE in the online institutional mapping template. HEI respondents selected appropriate primary learning outcomes for each programme or module entered in the template.

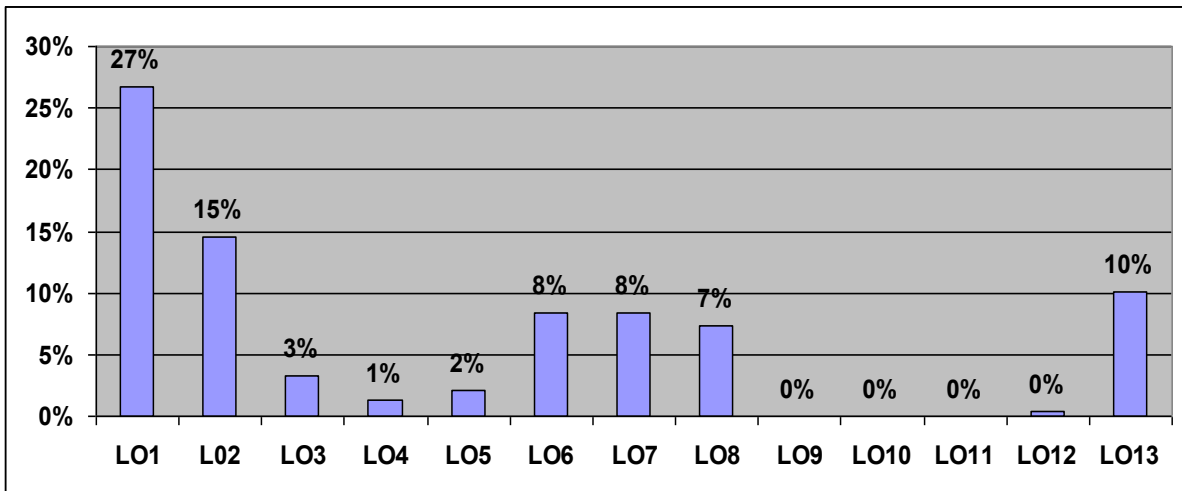


Figure 4: Learning outcomes of current provision in the regions of England (%)

In England, as shown in Figure 4, 27% of programmes/modules are reported as adopting Learning Outcome 1 'to raise awareness, knowledge and understanding about enterprise/entrepreneurship concept and practice'. Learning Outcome 2, 'to develop individual enterprising/entrepreneurial skills, behaviours and attitudes', and Learning Outcome 13, 'to exploit institutionally owned IP', are reported second (15%) and third (10%) respectively. The national averages however disguise considerable regional variation. For example, the East Midlands is at a much higher level (51%) than the national average for LO1 and although the NW is the lowest, 27% of programmes/modules in this region adopt Learning Outcome 6 'to motivate and inspire students toward an enterprising or entrepreneurial career or life' suggesting a different focus in the purpose of current provision.

4.1.5 Student Engagement

Table 2 shows that 45% of students are reported on UG modules, 26% on UG programmes, 16% on PG modules, 11% on PG programmes and 2% on other modules out of an enterprise student population of 44,054. Again we see significant regional variations (which closely matches the types of students targeted). There are considerably higher levels at UG in the NW, YH, EM and SW. Conversely, PG levels are slightly higher than the national average in LDN and much higher in both SE and in EE.

Table 2: Total number of students engaged in enterprise education

Programmes	No.
No. of Students on Full-time UG programmes	11368
No. of Students on Modules UG level	19774
Total UG Students	31142
No. of Students on Full-time PG programmes	4986
No. of Students on Modules PG level	7219
Total PG Students	12205
No. of Students on Other modules	707
Total Student Population	44054

4.1.6 Student profiles

Limited data were reported for students concerning ethnicity profiles and these are not presented here. Figure 5 shows that concerning gender there is an equal balance of male:female participation. Higher levels of domestic student and over 25yr old student participation are reported.

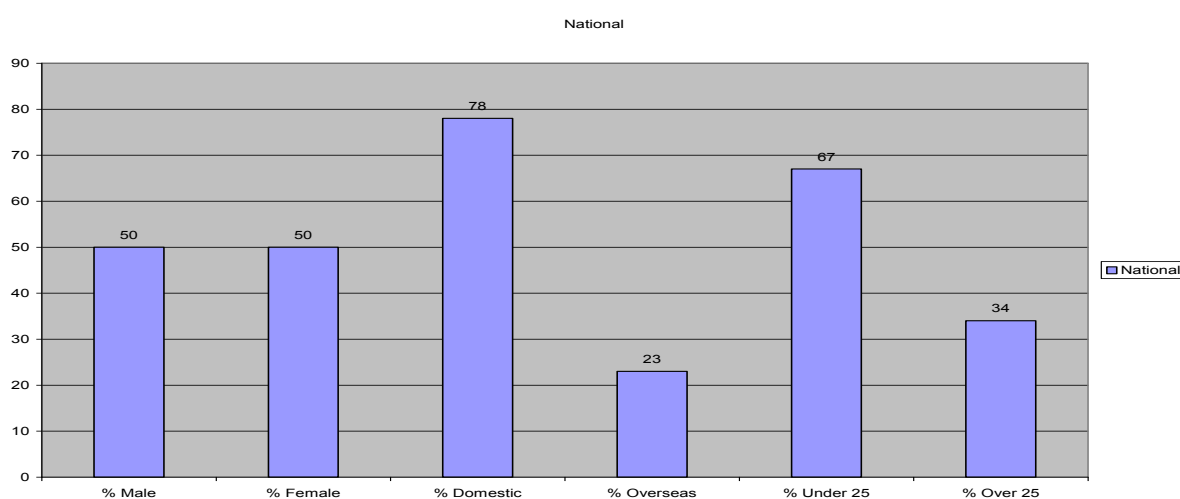


Figure 5: Student profile data for current provision (by gender, domesticity and age)

4.1.7 Longitudinal Growth of Current Provision

Figure 6 shows that the provision of enterprise education programmes/modules is reported as starting in 1970 and reaching a peak in Year 2004. The lower numbers in Year 2006 shown here reflect reporting data for a partial year as the survey was conducted during March and June 2006. The data illustrate periods of doubling in the rate of growth of current enterprise provision around 1997, 2001 and 2004.

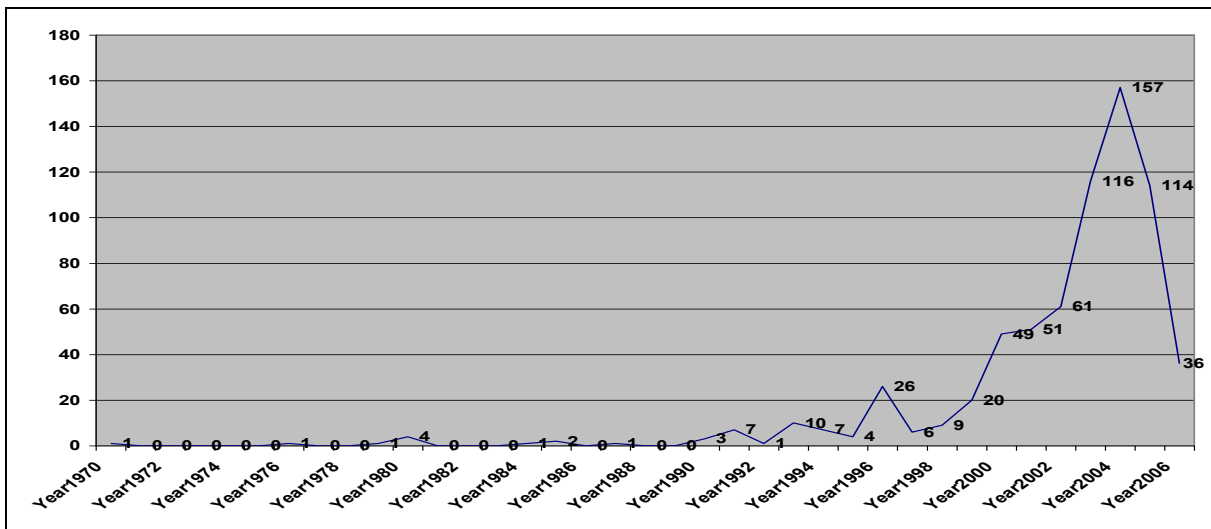


Figure 6: Number of programmes/modules started per year (1970 – 2006)

4.2 Planned Enterprise Provision

The presentation of the data for planned provision follows the same structure as that presented above for current provision.

4.2.1 UG:PG

There are 167 enterprise programmes/modules planned in HEIs in England, with 38% being UG modules and 27% being PG programmes (Figure 7). In total, planned programmes/modules at UG level (59%) is slightly higher than that at the PG level, but this percentage is at a more balanced level than the current provision.

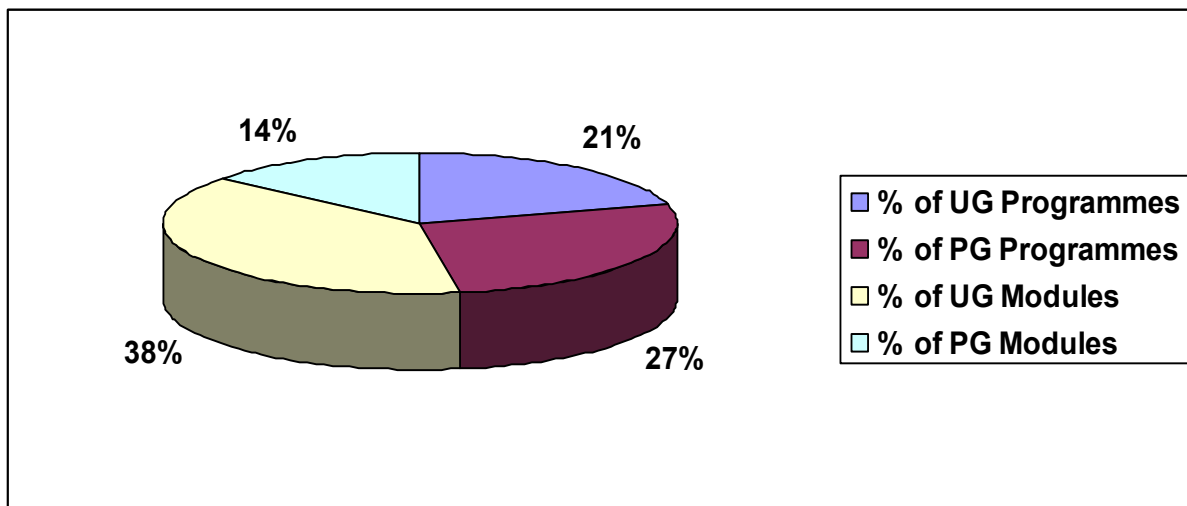


Figure 7: Planned programmes/modules in the regions of England (%)

4.2.2 Leading Faculties/Schools

Figure 8 illustrates that Business Schools (65%) followed by Art and Design faculties (13%) are the leading centres in England's enterprise planned provision. There is no reported planned provision to be offered by faculties of Law. Faculties such as Engineering, Medicine and Health and other faculties e.g. Faculty of Education will be offering the same level of enterprise provision. Regional variations are significant with 94% of planned programmes/modules in EE reported as offered by Business Schools. Art & Design accounts for 13% nationally, but this pattern is much higher in LDN and EM regions, with 40% and 30% respectively.

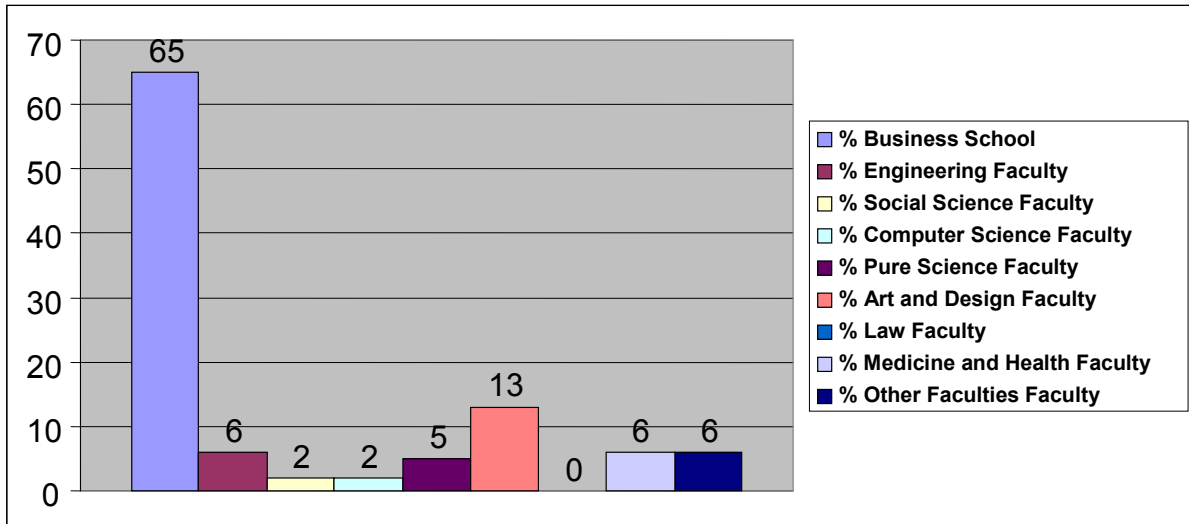


Figure 8: Leading centres of planned provision in the regions of England (%)

4.2.3 Primary Target Participants

In the regions of England, Figure 9 shows that 31% of all 167 planned enterprise programmes/modules are targeted at student groups in one faculty only and 29% at UG students only. There is still no planned provision specifically targeting women students, further education students or ethnic students. 5% of planned enterprise provision is targeting SET students. Nationally 4% of planned provision will target creative students but in the NE, YH, WM, EM and SW regions there is no planned provision targeting creative students.

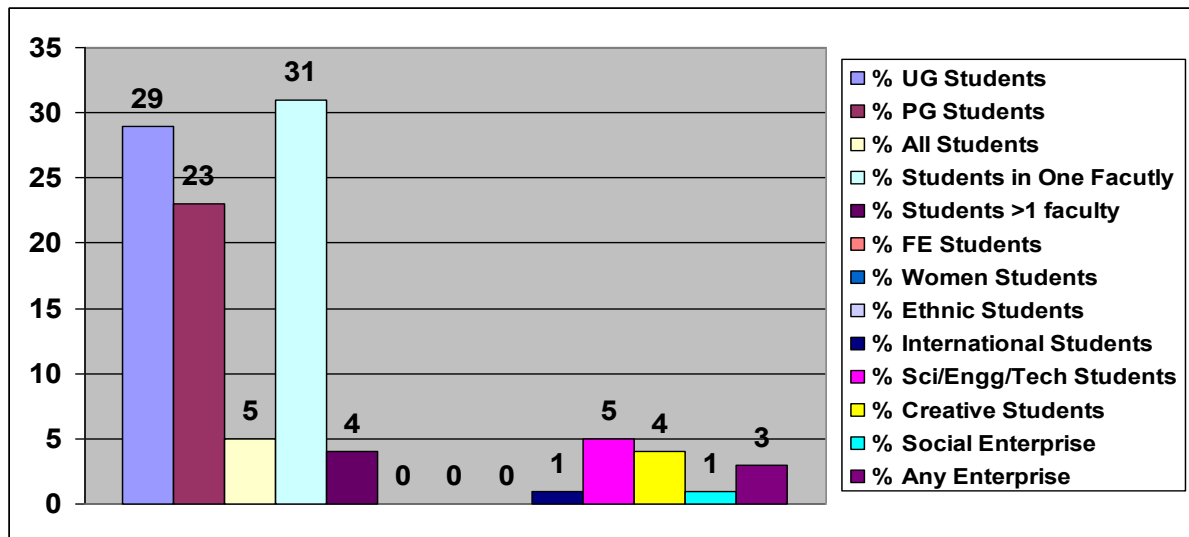


Figure 9: Target participants in planned programmes in the English regions (%)

4.2.4 Primary Learning Outcomes

Not all HEIs were able to report Primary Learning Outcomes for all planned provision. Figure 10 shows 26% of planned enterprise provision is focused upon Learning Outcome 2, 'to develop individual enterprising/entrepreneurial skills, behaviours and attitudes'. Learning Outcomes 1 and 7 account for 18% and 11% respectively, i.e. 'to raise awareness, knowledge and understanding about enterprise/entrepreneurship concept and practice' (LO1) and 'to understand venture creation processes' (LO7). These data may be indicative of a national shift in emphasis of the purpose of enterprise provision.

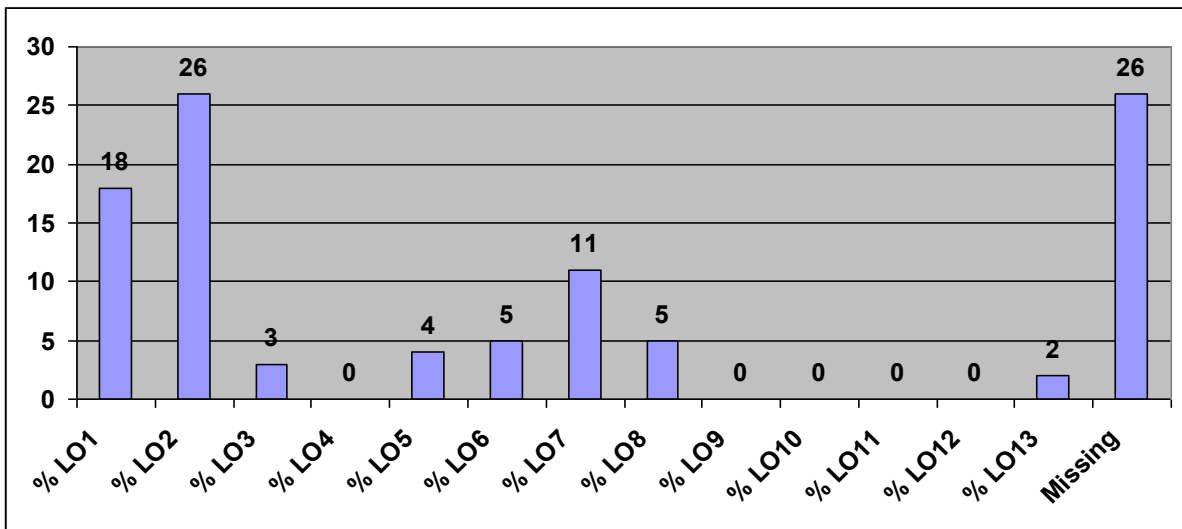


Figure 10: Learning outcomes of planned provision in the regions of England (%)

4.2.5 Student Engagement

Figure 11 illustrates that 48% (3,748) of students on planned enterprise provision will be on UG modules, 27% (2,111) on UG programmes, 15% (1,170) on PG programmes, 8% (625) on PG modules and 3% (200) on other modules out of a total forecast of 7,854 additional students. Hence 75% of all planned programmes/modules will target students at UG level and only 23% will target those at PG level.

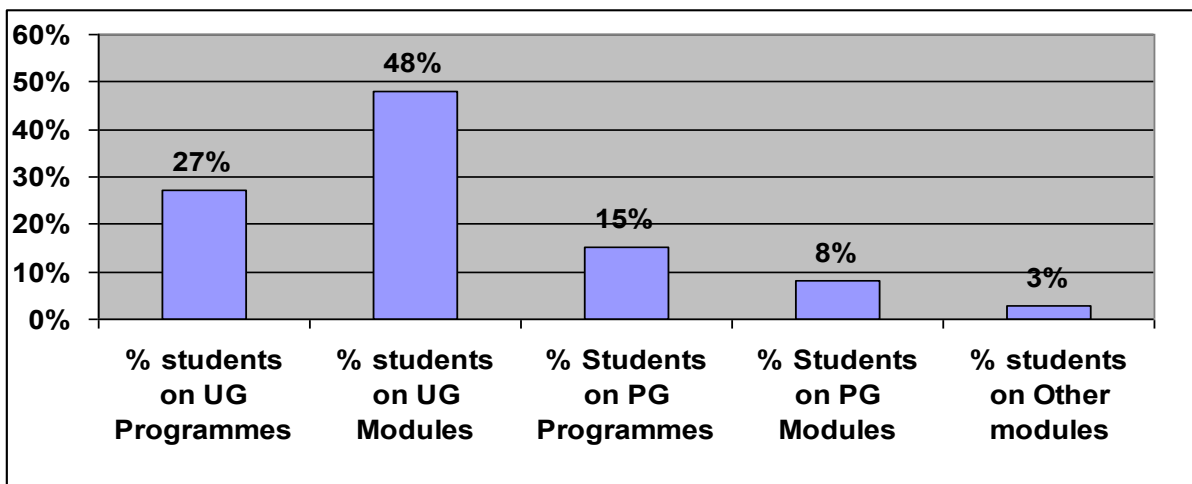


Figure 11: Breakdown of students' involvement on planned programmes/modules

In the NW, SE, SW and LDN planned UG modules are higher than the national average, with NW (75%) the highest level nationally. EE, EM, WM, YH and NE are lower than that at the average with YH (9%) at the lowest level.

4.2.6 Longitudinal Growth

Figure 12 shows that there are 94 planned number of enterprise education programmes/modules in England in Year 2006 in addition to those already reported as current provision, a further 36 programmes/modules thereby totalling 130 programmes/modules in Year 2006. This represents an increase over 2005 but still lower than the peak of 2004 of 157 programmes and modules.

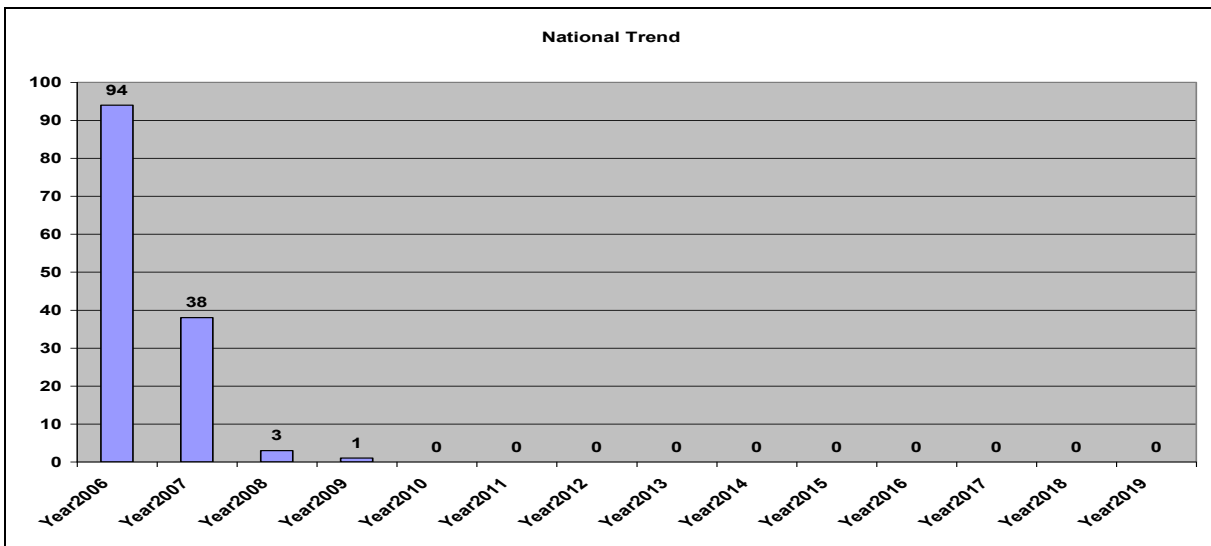


Figure 12: No. of enterprise programmes/modules planned over years (2006 +)

However, from the above chart, there is much less enterprise provision planned for 2007.

4.3 Non-Accredited Enterprise Activities

This section of the paper presents non-accredited enterprise events in regional HEIs, the funding body that supports these events, numbers of students involved with specific events and target participants for these events. Whilst these are not accredited programmes, these events may serve a number of purposes such as encouraging students to start a business; or even just to promote enterprise as a subject that they may choose to study in an optional module.

A list of 24 non-accredited enterprise activities has been identified by NCGE for the national mapping study. A full list is presented in Table 4 (in the Annex to this paper). Of all 5,324 non-accredited enterprise activities reported by HEIs as being currently provided, the majority are Enterprise Workshops (20%) and personal coaching (18%).

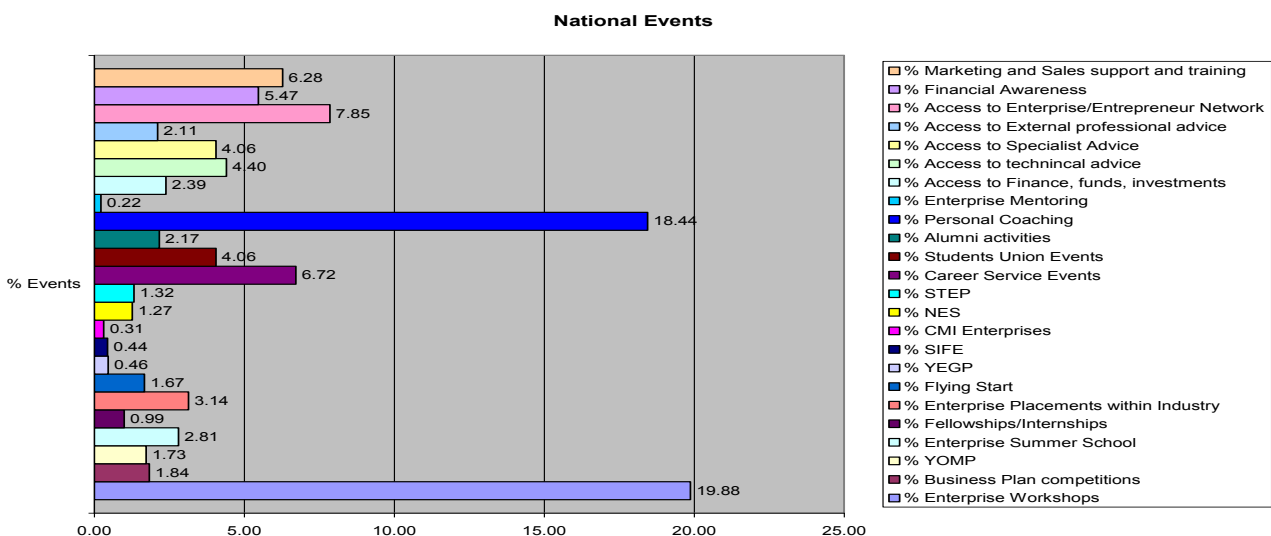


Figure 13: Breakdown of non-accredited enterprise events: national view (%)

4.3.1 Funding sources

Extra-curricular activities are reported as being funded from numerous different sources. Nationally, the primary funding sources for the majority of activities are Higher Education Innovation Funds, a central government fund for higher education (34%), and University Core Funds (20%). In general, such activities are funded from public sources either institutionally or through government policies. On average, Regional Development Agencies are reported as providing 8% of funds.

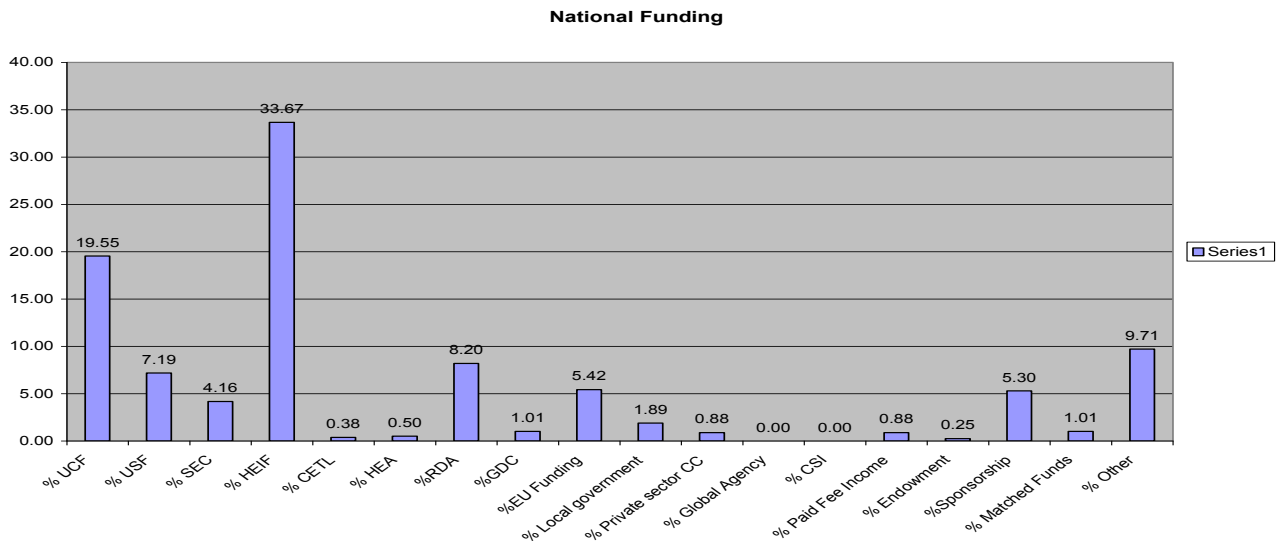


Figure 14: Funding sources for extra-curricular activities (%)

4.3.2 Total No. of students involved

There are total of 87,869 students in England reported as currently involved with non-accredited activities. Figure 15 shows that the numbers of students involved with the non-accredited events is highest level for Enterprise Workshops (23%) and Careers Service Events (21%). Also popular with enterprise students are Students Union Events (12%).

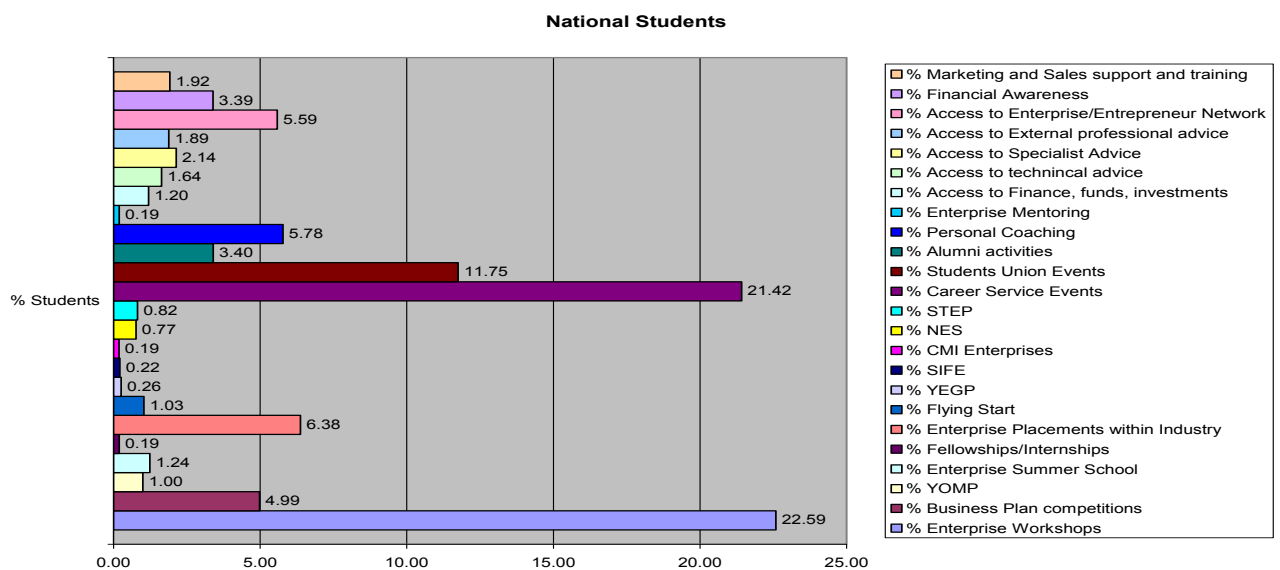


Figure 15: No. of students involved with non-accredited events: a national view (%)

National

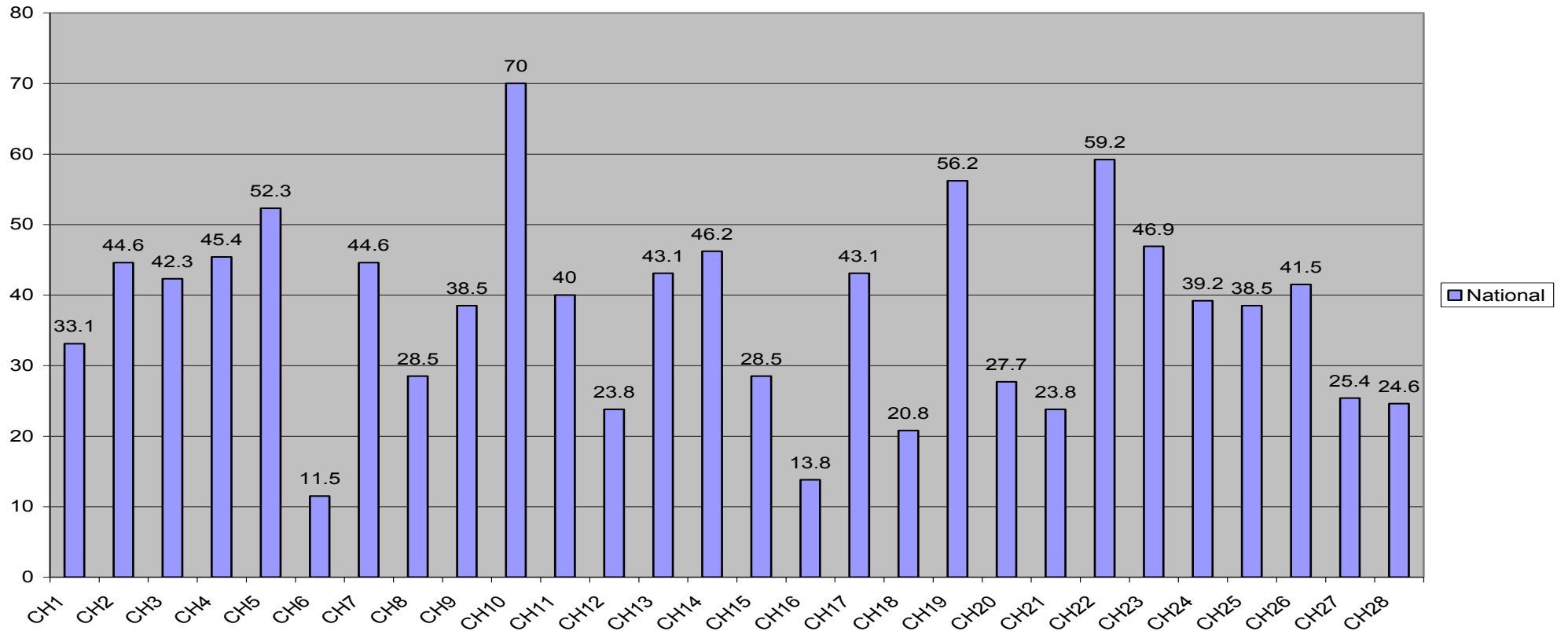


Figure 16: Participation in other institutional characteristics (%)

4.4 Other institutional characteristics

In this section, a 'Yes' or 'No' response was sought against a list of 28 institutional characteristics illustrative of factors affecting the institutional environment for enterprise and entrepreneurship – for the full list see Table 5 in the Annex to this paper. Figure 16 shows the percentage of HEIs in England that have responded 'Yes'. Characteristics 10, 22 and 19 are the highest – participation in regional events; integration with careers services events; and, integration with Business Links. The lowest responses nationally relate to: Student Enterprise Interns; Development Sabbaticals for Staff; and, Professors of Practice and Development.

5. CONCLUSIONS

From the earlier partial UK surveys it has been demonstrated that substantial growth in enterprise and entrepreneurship provision in UK HEIs has continued into the 21st Century. The self-reported data provided in this comprehensive study of HEIs in England provides a strong evidence base to support the provision of, and engagement in, enterprise and entrepreneurship education and support across England's HEIs is growing. Nearly 900 programmes and modules are now recorded, representing a doubling of provision over the past decade. The longitudinal growth data highlight that although there was a doubling of annual growth between 1994 and 1997 and a further doubling in provision to 2002, there has been a more consistent increasing rate of growth during 2003 and 2004 when annual growth in provision more than doubled.

However, when considering future planned growth the rate drops dramatically and is nearly non-existent in 3 years time. This is not surprising as most HEIs will not be planning new course introductions this far in advance. The drop in next year would be a concern if this were a trend through the next few years as this would then signify a stagnant or very slow growing rate of new curricula development. This may be appropriate for well established disciplines and subjects but not in a new area such as enterprise and entrepreneurship.

A significant finding from the reported data is the level at which Business Schools lead current course provision and dominate by a substantial margin – 7 to 8 times that of the next leading Faculties: Engineering, Art & Design. Clearly these data should not be interpreted to mean that students not in Business Schools are not engaging in enterprise and entrepreneurship. Evidently they are, and as part of joint courses and open modules. However, this finding does raise the question about the conception of enterprise or entrepreneurship that underpins Business School provision and its relevance across other faculties and in meeting a broader set of entrepreneurial learning outcomes. It is not the aim of this survey to unpick this, however further exploration of the issue if explored within a recent NCGE report (NCGE 2006).

To try to understand the overall purpose of current credit-bearing provision in HEIs across England all respondents were requested to select the primary learning outcome for each of the programmes and modules that they listed in the online template. Nationally the emphasis was towards "*raising awareness, knowledge and understanding about enterprise/entrepreneurship concept and practice*", which may be described as a more academic approach, i.e. provision 'about' entrepreneurship, rather than 'for' entrepreneurship. However this does shift nationally when future planned provision is considered. For this section, the data provided emphasises that the primary learning outcome will be "*to develop individual enterprising/entrepreneurial skills, behaviours and attitudes*", thereby perhaps indicating a more behavioural emphasis. Although not reported in this paper, there are significant variations across the regions of England.

In considering the primary target participants for course provision the data suggests that there could be specific gaps as few courses target as their primary participant either female students or students from ethnic minorities. Similarly the data identify that few courses target those interested in social or creative enterprise. However, the data strongly suggest that female and male participation rates in enterprise in general are almost equal. The survey also sought responses to ethnicity profiles of those students engaged in enterprise but, as these were insufficiently robust, they are not reported. The data in this section are clearly illustrating that, although female and ethnic minority students engage in enterprise activity and some of these students have an interest in creating social and creative enterprises, HEIs in general do not design and offer credit-bearing courses specifically targeting such groups or interests. This may be symptomatic of the institutional model or approach to supporting entrepreneurship or individual educators' interests. This may be an observation that is of interest to policy-makers wishing to encourage targeting of such groups or areas of interest.

Two-thirds of students are reported engaged in extra-curricula activity, twice the number engaged in credit-bearing provision. This is to be expected, perhaps, as non-credit-bearing activity is quicker to establish as it is not subject to the same validation processes as credit-bearing provision; it is often short in duration; and, of course, participants are not formally assessed by the institution. Students often enjoy participation in such activities and in some cases it can enhance their exposure to other parts of the institution and staff and students and alumni not involved with the individual's own subject area or faculty.

However, there are implications from this finding that should be considered. Firstly, much of this activity is often externally and mainly funded from the public purse. The termination of short-term project funding or the changing of funding mechanisms creates a fragility to sustainable provision unless this can become embedded within core-funded HEI activity. Secondly, it is not always explicitly clear how such activities contribute to the learning outcomes being developed.

Overall, although the findings highlight a wide range of extra-curricula provision, it is observed that many HEIs and indeed students engage in a limited number of activities. This could be that some are still new and will grow in participation rates, or that others are not seen as relevant by either staff or students as they are not perceived as fitting easily within what individual HEIs are trying to do and achieve.

The final section of the template aimed to illuminate the broader context and environment within which enterprise and entrepreneurship support is provided. The 28 characteristics can be grouped into 4 main categories: (1) institutional policy approach; (2) infrastructure development; (3) faculty/staff development; (4) integration of provision. In so doing it can be observed that on average most HEIs are engaged in integration of their provision externally across their region and locally with Business Links, and internally with their careers services and technology transfer offices. Around half of the HEIs in England reported on average having the range of infrastructure developments listed, i.e. incubators, hot-desks, student start-up funds and champions. Nationally, the two other areas were less well supported. Less than half reported having explicit enterprise policies and embedded mission statements, or curricula development funds and sabbaticals for staff. Around one quarter on average reported specifically supporting women-friendly groups or having Professors of practice or development.

6. SUMMARY AND NEXT STEPS

In summary this paper aimed to present the findings from the NCGE mapping study of enterprise and entrepreneurship provision across the HEIs in England. It was conducted in 2006 and 94% of the identified HEIs provided online data for the survey. The aim of providing a comprehensive map of the 9 regions of England has been successfully completed and this now provides an illumination of the HE landscape in England for supporting student enterprise and graduate entrepreneurship. The self-reported data illustrate the scale and scope of provision and engagement in credit-bearing and non-credit-bearing activities currently offered and planned for the near future. Additionally there is an insight into the characteristics of the institutional environment within which this takes place, i.e. the HEI context for entrepreneurship education.

As with all self-reporting surveys, there are always limitations to the interpretation of the findings and the conclusions that can be drawn – due to accuracy, interpretations and understanding – however these data are the most recent and most accurate data available and care has been taken not to misinterpret the findings. HEIs vary in their capturing and management of enterprise and entrepreneurship related data. Indeed, institutions are not incentivised to collect and hold such data unless the provision forms part of core funded or project funded activity and the providers of funds require specific data reporting. There are data fields therefore that were more or less easy to complete than others. For example, data about teaching resources proved difficult for a number of institutions.

However, the approach taken in this survey with all existing data held online, creates the opportunity for annual surveys to be undertaken with a low upstream resource requirement for participating HEIs. Updating records is easier than first creating the initial data record. Undertaking an annual analysis will enable a range of trends/patterns to be observed. Furthermore international comparison will be possible.

In closing, it is implied from the findings that government policy initiatives and funding mechanisms have stimulated a growth in HE activity, i.e. SEC, HEIF, and HEA. Such growth has broadened engagement by faculty staff and students and enabled the development of a momentum and an interest in supporting student enterprise and graduate entrepreneurship within and outwith the formalised curricula.

The completion/termination of some funding mechanisms and uncertainty about future funding could impact on provision, or at least its future rate of growth. Most commentators would probably agree that a 7% student engagement is too low and that this % needs to be significantly increased over the next decade. This will require further stimulation by those agencies supporting enterprise and entrepreneurship development working closely with HEIs and national bodies.

The challenge therefore for all involved – HEIs, educators, RDAs, Central Govt, national organisations, employers and entrepreneurs – is to develop longer-term coherent and cohesive strategies for sustainable development and growth in supporting student enterprise and graduate entrepreneurship within the HE sector that complement local, regional and national frameworks. This survey instrument will be a valuable tool for benchmarking developments.

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ANNEX

Table 3: Primary Enterprise Learning Outcomes

No.	Primary Enterprise Learning Outcomes
LO1	To raise awareness, knowledge and understanding about enterprise/entrepreneurship concept and practice
LO2	To develop individual enterprising/entrepreneurial skills, behaviours and attitudes
LO3	To develop personal self-confidence and capability
LO4	To develop empathy with an entrepreneurial way of life
LO5	To embed entrepreneurial values and beliefs
LO6	To motivate and inspire students toward an enterprising or entrepreneurial career or life
LO7	To understand venture creation processes
LO8	To develop generic entrepreneurial competencies
LO9	To develop key business 'how-to's'
LO10	To develop personal relationship and networking skills
LO11	To prepare for becoming a freelancer or self-employed
LO12	To start a new business
LO13	To exploit institutionally-owned IP

Table 4: list of non-accredited events

1	Enterprise Workshops
2	Business Plan competitions
3	YOMP
4	Enterprise Summer School
5	Fellowships/Internship
6	Enterprise Placements within industry
7	Flying Start
8	YEGP
9	SIFE
10	CMI Enterprises
11	NES
12	STEP
13	Career Service Events
14	Student Union Events
15	Alumni activities
16	Personal Coaching
17	Enterprise Mentoring
18	Access to Finance, funds, investments
19	Access to technical advice
20	Access to specialist advice
21	Access to External professional advice
22	Access to Enterprise/Entrepreneur Network
23	Financial Awareness
24	Marketing and Sales support and training

Table 5: list of total 28 institutional characteristics.

1	VC/PVC for Entrepreneurship
2	Incubator for Students
3	Start-up funds for Students
4	Hot desk/drop-in facility
5	Entrepreneurship Champion
6	Student Enterprise Interns
7	Awards offered or received for enterprise
8	Sponsorship
9	Dedicated Centre for Students
10	Participation in Regional Enterprise Events
11	Student-led enterprise club
12	Professors of Practice/Development
13	University wide approach to Enterprise
14	Support for Enterprise teaching development
15	Curricula Development Fund
16	Development sabbaticals for Staff
17	Dept staff trained in Enterprise education
18	Integration with Shell Livewire
19	Integration with Business Link
20	Integration with the Patent Office
21	Integration with UK Trade and Investment
22	Integration with Careers Service
23	Integration with Technology Transfer Office
24	Integration of Entrepreneurs in Development
25	Embedded in institutional mission statement
26	Explicit institutional enterprise policy
27	Faculty level enterprise action plans
28	Women friendly or Other specialist group