

## Competencies for Academics<sup>1</sup> in Knowledge Transfer (KT) Activity

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Proceedings of the British Psychological Society's 2007 Occupational Psychology Conference, Bristol, England. (2007)

### *Introduction*

Since the advent of the White Paper on “The Future of Higher Education” (January, 2003), the Lambert Review of Business-University collaboration (December 2003) and the Higher Education Funding Council’s HEIF (Higher Education Innovation Funding) ‘third-stream’ initiatives HEIs are increasingly aware of the need to consider ways in which they can actively engage in knowledge transfer, whether it be from the application of research, the dissemination of expertise through consultancy or the transfer of best practice through CPD programmes. The extent to which existing HR processes (e.g. job/role analysis, training/development provision) for academics in HE at national and local levels reflect this activity is limited. This research seeks to provide evidence-based information to inform these processes.

### *Objectives*

The objectives of the study were to identify:

1. the KT tasks/activities academics engage in
2. the competencies required for these KT activities
3. the barriers to KT activity for academics

### *Design*

The study used a mixed-method design comprising a qualitative approach involving focus groups (as the main purpose of the study was of exploratory nature, aiming to develop ideas) and a quantitative study through an on-line survey.

### *Methods*

Three groups of individuals with different degrees of involvement in KT activities in an HEI context were involved: 1) KT professionals, e.g. KT staff in Regional Offices, Business Development Managers etc.; 2) Academics with a dedicated KT role e.g. Medici or Innovation fellows and 3) Academics who engage in KT as part of their normal academic contract. 67 KT specialists, 41 academics with a dedicated KT role and 47 academics without a dedicated KT role, from 13 West Midlands universities/colleges, all of whom had been nominated by a KT institutional representative, were approached by Email and invited to participate at their preference either in a focus group or email survey. Overall, 32, 10 and 14 responses were received respectively, representing an overall response rate of 39%.

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<sup>1</sup> ‘Academics’ here defined as academics on a standard contract where job role is focused on teaching, research and administration and knowledge transfer is considered as either a replacement for one of these activities or in addition to these activities i.e. it is not a dedicated knowledge transfer role.

### *Stage 1 – Focus Groups*

45 people took part in 6 focus groups held in 3 different regional locations in February 2006. Where possible, participants from the same academic institution were separated into different groups. Experienced facilitators led the groups, assistants took notes and each group was audio taped.

#### *Tasks/activities-Objective 1*

An unguided brain-storming was conducted asking the groups to list the tasks carried out by individuals involved in KT activities together with the degree of experience they felt was required for conducting each of the listed tasks.

#### *Behaviours/competencies-Objective 2*

Using a modification of the Critical Incident Technique (Flanagan, 1954) participants were asked to recall successful KT projects they had been involved in and to describe them in detail to the group. After the example had been given, the facilitator drew the narrator's focus to the behaviours that the individual in the described example had displayed and that had contributed to the success of the project. Other group members were invited to contribute their opinions or references to similar experiences to the discussion. This procedure was repeated until each participant had provided at least 2 examples. This was repeated for unsuccessful KT projects to establish negative behavioural indicators.

#### *Barriers –Objective 3*

An open brain-storming approach was used to elicit the barriers. Participants were asked to name and describe barriers that they had experienced and/or would expect to impede on an academic's involvement in KT.

### *Stage 2 – Online Survey*

The survey was carried out between April and May 2006. Emails inviting individuals to participate in the study were sent to those previously agreeing to take part 60 anonymised responses were received. Individuals from 7 higher education institutions participated in the survey, 30 were KT professionals, 22 were academics without a dedicated KT role and 8 were academics with a dedicated KT role.

#### *Tasks/activities-Objective 1*

A list of tasks and activities carried out under the KT umbrella as reported by participants in the focus groups was presented. Respondents were asked to rate the tasks with regard to the extent to which in their experience they would be carried out by academics on a five-point Likert scale (1=very often to 5=very rarely). Participants were also asked to judge the level of experience required to successfully carry out each task using a three-point scale (1=little, 2=some, 3=a lot of KT experience). At the end of the section participants were given the opportunity to list any further tasks and activities they felt an academic might carry out when involved in KT.

#### *Behaviours/competencies-Objective 2*

With regard to the exploration of behaviours critical for successful/unsuccessful running of KT projects, a qualitative approach was taken presenting participants with open questions. Similar to the procedure in the focus groups, participants were prompted to recall successful and unsuccessful KT projects and then asked to list the behaviours that

the individuals involved in the example had displayed and that made the project a success.

### *Barriers –Objective 3*

Participants were invited to rate the barriers compiled in the focus group sessions to the extent to which they felt they would impede on an academic's engagement in KT using a five-point Likert scale (1=to a very little extent to 5=to a very great extent). Participants were also given the opportunity to add additional barriers that they felt were important and not listed in the survey.

### **Results**

A list of 17 tasks was generated providing some clarification of what is perceived to fall under the heading of third-stream activities. The top 5 tasks cited were: giving presentations/conference papers, applied research, authoring practitioner/applied research books/journal articles and training. The tasks/activities that participants judged would be carried out only rarely by academics were secondments/business placements, CASE awards and patent/licence/spin out activities. There was good consensus on the degree of KT experience perceived as required to complete a number of these tasks. Typically, participants felt that little experience was required for testing and authoring whilst much for patents, licences and spin-outs and some for Knowledge Transfer partnerships (KTPrtns), applied research, mentoring/coaching, regeneration projects and training. There was less consensus about the level of experience required to complete other tasks, such as consultancy and expert witness work, reflecting either the real variety that exists in the level at which these tasks are carried out or participants inability to rate them accurately due to lack of true knowledge about the tasks.

The study identified 263 behaviours from the focus groups. Each of these behaviours were categorized according to the SHL Universal Competency Framework (Bartram, D., Robertson, I. & Callinan, M. , 2002; Bartram, 2005; Kurz, R. & Bartram, D. ,2002) by two independent raters and any differences discussed with a third rater. A rank order list of competencies in order of importance was generated on the basis of numbers of behaviours identified in each competency. Whilst indicators were generated for each of the 8 competencies, two, 'interacting and presenting' and 'organising and executing' were by far the most predominant recording at least twice as many behaviours as the other competencies. After removal of duplicate behaviours 186 behaviours remained. For each competency key example behaviours were identified e.g. (1) Presenting and Communicating Information (e.g. put information across concisely and easily accessible for client), (2) Relating & Networking (e.g. build rapport through regular contact with client), (3) Delivering Results and Meeting Customer Expectations (e.g. establish client's needs through probing and confirm them in writing), (4) Entrepreneurial & Commercial Thinking (e.g. stay in touch with latest development within the industry), (5) Planning & Organising (e.g. provide clear schedule), (6) Working with People (e.g. listen to advice), (7) Persuading & Influencing (e.g. demonstrate and sell benefits of certain actions), (8) Enterprising and performing (e.g. identify and develop technology ahead of the market and industry demand). Key predictors of the most important competencies are suggested as general mental ability, extraversion, conscientiousness and need for achievement (Bartram, 2005).

A total of 19 institutional and 20 individual barriers were identified ranging from rewards and incentives through to risk aversion. These findings concur with barriers identified in other contexts (Jacobson, Butterill & Goering, 2004); Yih-Tong & Scott, 2005).

The top 3 institutional barriers were: Lack of reward/incentives for Department, Lack of investment in core academic/research KT staffing (i.e. mostly project-based), Bureaucracy (form-filling) required to engage in KT processes. The top 4 individual barriers were: Academic's time available to pursue KT is too fragmented, Lack of academic's time to engage in KT, Lack of reward/incentives for academic, Mis-match of academic and commercial time-scales.

Of interest, is the finding that at the individual level 3 of the top 4 barriers relate to time. Most importantly, it is not lack of time per se that is the biggest barrier, but lack of suitable blocks of time in which to carry out the work. This might suggest that expecting academics to engage in all three activities of teaching, research and KT is simply too much. The degree of polychronicity (multi-tasking) that this requires is problematic when one considers the complex and often conceptual nature of the tasks involved. A study by Frei, Racicot & Travagline (cited in Francis-Smythe, 2006) showed that whilst academic faculty members' involvement in multiple projects gave the impression they were polychronic, they had a preference for monochronicity. Requiring polychronic behaviour from people with monochronic tendencies could result in poorer performance and psychological well-being.

The results also demonstrate that there are significant differences between KT professionals and academics with regard to the perception of the importance of certain barriers. KT professionals appear to perceive academics 'lack of motivation to engage in KT activities', 'their personal preference for UG/PG teaching/pure research' as well as the fact that KT was perceived as 'of less value than teaching and research' to impede stronger on academics' engagement in KT activities than academics do themselves.

### ***Conclusions***

An equal split in KTPs and academics in the survey suggests findings are representative across roles. Equally the relatively good consensus on ratings of tasks and barriers across participants suggests a good degree of commonality in perceptions. It might be argued that frequency of report, the methodology employed in this study to determine rank ordering of competencies, does not determine importance. However, in this instance where participants were encouraged to state the behaviours that they witnessed it is deemed to be a suitable measure. The SHL Universal Competency framework (Great Eight) provided a thorough and easily applicable template for the categorization of the behaviours.

Overall, the results of this study provide valuable information on 'the tasks involved in', 'the competencies required for' and 'the barriers to' academic engagement in KT. If we truly seek to enhance academic engagement in KT then we need to utilize and embed this information at a national and local level in each of the HR processes of job design,

recruitment and selection, performance management, training and development, career and succession planning.

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