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# Performance incentives and public college accountability in the United States: a quarter century policy audit

*by*
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*The allocation of funds to public colleges based on performance criteria rather than activity or enrolment criteria is often described as performance funding. In the United States, performance funding policies have become a frequently used instrument of higher education accountability. The history of such policies, however, is a complex one, with some states implementing such policies while others discontinue them. This paper describes and evaluates the first and the longest-standing performance funding policy in the United States, one designed and implemented in 1980 and remaining in effect for over 25 years.*

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# Encouragement des performances et transparence des établissements publics d'enseignement supérieur aux États-Unis : analyse d'une politique vieille d'un quart de siècle

*par*
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Université du Tennessee et Tennessee Higher Education Commission, États-Unis

*L'attribution de fonds aux établissements publics d'enseignement supérieur sur la base de critères de performance plutôt que de critères basés sur l'activité ou les effectifs est souvent décrite comme un financement fondé sur la performance. Aux États-Unis, les politiques de financement fondées sur la performance sont de plus en plus fréquemment utilisées comme instrument d'évaluation de la transparence de l'enseignement supérieur. Toutefois, l'histoire de ces politiques est assez complexe et certains États les appliquent alors que d'autres les ignorent. Cet article décrit et analyse la première et la plus longue politique de financement fondé sur la performance appliquée aux États-Unis, conçue et mise en œuvre en 1980 et effective depuis plus de 25 ans.*

## Introduction

In the latter years of the 20th century and the opening years of the 21st, accountability clearly became a major international policy issue. In the United States, the evidence of this policy accent may be found in major public reports, books, op-ed pieces in the media, state legislation mandating assessment and performance indicator reporting and the publication of various higher education "report cards" at national, state and campus levels. Beyond assessments, report cards and other instruments of accountability just cited, performance funding and performance budgeting have been employed in some states as a policy instrument to promote higher education accountability (Burke and Associates, 2002).

Following a five-year design and development period, in 1979/80, the state of Tennessee implemented the Tennessee Performance Funding Policy. It applied to the 23 public colleges and universities in the State of Tennessee (Bogue and Brown, 1982). Linking a portion of state funding to five performance indicators, this is the first performance incentive policy in the United States and one that anticipated the developing accent on accountability for higher education. The design of the policy has contributed to its continued operation now for over a quarter of a century, working in both healthy and difficult budget moments for higher education in Tennessee and remaining viable through two Republican and two Democratic governors.

This paper presents an audit of the Tennessee performance policy design and effectiveness and an exploration of the factors associated with the policy's quarter century longevity and impact. First, it examines the challenge of framing effective accountability policies for colleges and universities and the questions of policy design to be engaged. This policy exploration is followed by a brief review of the five-year developmental origins of the policy and the design features that have permitted continuing revision of the policy. The evolution of the performance standards is profiled over that 25-year period, and the paper concludes with an assessment of policy outcomes and impact.

## Emergence of the accountability policy accent

The call for higher education accountability has been growing over the past three to four decades. In the United States, one of the early calls for accountability was Mortimer's monograph *Accountability in Higher Education* (1972). An array of public reports, journal articles and books has documented

the emergence of the accountability expectation. A report entitled *Accountability for Better Results: A National Imperative for Higher Education* was issued by a special commission created by State Higher Education Executive Officers (SHEEO, 2005). In 2008, the Educational Testing Service issued its report *A Culture of Evidence: An Evidence-Centered Approach to Accountability for Student Learning Outcomes*. These "book-end" reports carry an accountability focus on performance results and evidence.

A major national expression of accountability policy in the United States is echoed in the *Measuring Up* reports (2000, 2002, 2004, 2006, 2008) issued by the National Center for Public Policy and Higher Education. These reports grade state higher education systems on such factors as preparation, participation/access, completion/graduation, affordability, benefits and learning outcomes/knowledge and skill. Other recent publications of the continuing and emergent accountability call, in this nation and internationally, include *A Test of Leadership: Charting the Future of US Higher Education* (USOE, 2006), issued by a Commission appointed by the then Secretary of Education Margaret Spellings. The Organisation for Economic Co-operation and Development (OECD, 2006; Ischinger, 2006) published two articles on the subject; finally, the National Conference of State Legislatures issued a report by a Blue Ribbon Commission on Higher Education entitled *Improving Higher Education Performance and Productivity* (NCSL, 2007).

The complexity of higher education's mission, governance and outcome notwithstanding, no timidity on questions of management and educational effectiveness is warranted. But there is also a need for serious reflection on balancing educational cultures of improvement and civic/political cultures of financial stewardship. Balancing cultures of faith and cultures of evidence, however, is neither a small nor simple policy challenge.

For example, to what extent do the several internal and external stakeholders of higher education share an understanding of the definition and purpose of accountability and the evidence they would accept to demonstrate accountability? This is a highly complex issue, as revealed in the following questions:

1. To whom is higher education accountable and what is the basis for various stakeholder claims for accountability?
2. How might different stakeholders define the purpose of accountability policy and how might educational cultures of improvement be reconciled with civic/political cultures of financial stewardship?
3. What evidence will different stakeholders accept as legitimate and adequate? Is there common consent on performance indicators and evidence?
4. Once the indicators and/or evidences of accountability have been established, will the standard of performance evaluation be one of good

practice, of legal compliance, or of comparison to some criterion or peer reference?

5. Will accountability policy highlight economic development and workforce readiness goals but neglect other important purposes of higher education such as personal discovery, civic awareness and responsibility, the pursuit of social justice, and search for new and basic truths?
6. Will accountability policy permit, or even encourage, cosmetic and adaptive responses rather than substantive performance responses?
7. Does it make a difference who gathers and presents data on higher education accountability? Will a third party auditor be required for civic credibility? (Bogue, 2006)

There is research evidence that political, business and academic leaders do not hold the same perspectives on the purposes of accountability policy (nor for higher education) and may not agree on acceptable evidence of accountability (Bogue, 2006; Bogue *et al*., 2009).

## Policy purpose and origins

Designed and implemented in the late 1970s, the Tennessee Performance Funding Policy anticipated answers to some of the above accountability questions. But before going into greater detail, a quick summary of policy purpose and origins would be useful. During the 1960s and 1970s, a primary policy question in the United States was how to allocate state appropriations equitably among a growing and diverse number of public colleges and universities. The policy adopted in many states was called formula funding, an allocation policy based on enrolments and costs by programme (from English to engineering) and by level (from undergraduate to graduate).

Such policy formulas recognised cost variations by programme type and level and resulted in a reasonable approach to equity, taking into consideration institutional mission/programme profiles and size of campuses and programmes. A later refinement added a dimension of peer funding in recognition that institutions were competing in a different salary market. The principle of "equivalent funding for equivalent programmes" was easily understood by educators and political leaders. This policy approach, however, was based on activity and not achievement, on how much but not on how good.

Anticipating an emergent interest in accountability, in 1974/75, the higher education community of Tennessee, under the primary leadership of the Tennessee Higher Education Commission, set in motion a five-year, USD 500 000 effort funded by the Fund for the Improvement of Postsecondary Education, the Ford Foundation, the Kellogg Foundation, and an anonymous Tennessee foundation. The purpose of the policy developmental effort was to

explore the philosophical and technical feasibility of allocating some portion of state funds on a performance criterion rather than an enrolment criterion.

It is worth noting that: *i)* the policy initiative was launched by the higher education community and not politically imposed; *ii)* policy development involved representatives from institutions and their governing boards, from legislative and political officers and from national higher education scholars; and *iii)* policy design and pilot implementation took place over a five-year period. **This policy design effort was patient, persistent and participatory.**

This five-year design effort produced an initial policy design that allocated 2% of an institution's budget to its state appropriations request based on five performance indicators, to be more fully described later in the paper. One of the most difficult policy design questions concerned what proportion of institutional budgets should be risked on the performance policy. The educational and political consent was initially 2% of each institution's state appropriation recommendation. Based on the theory that small rudders can move large ships, campuses making a perfect score on the five performance standards would have an additional 2% added to their state appropriation request. In 1987, the percentage of state budget appropriations recommendations at risk on the policy was raised to 5.45%. How the five performance standards were scored is explored in the original project report, *Allocation of State Funds on a Performance Criterion* authored by Bogue and Troutt (1980) and in a *Harvard Business Review* article by Bogue and Brown (1982).

Two other Tennessee policy features were noteworthy. First, a periodic five-year recurrent evaluation/revision was built into the policy. This policy renewal feature allowed higher education and government leaders to look at policy performance through philosophic, political and educational lenses and make adjustments. The "ownership" by multiple stakeholders has been critical to the long-term viability of the policy; it has contributed to important revisions in performance indicators, all of which are examined in this policy audit paper.

Second, this was not a zero-sum policy. Funding gains for one campus were not at the expense of another campus. But this policy feature masked another strength: the policy has held fast during budget periods of increasing state appropriations and in less favourable budget moments. This policy staying power is in serious contrast to some other state enrichment and performance policy approaches that were abandoned or discontinued when state budget conditions grew tight. See, for example, the report of the South Carolina experience in Bogue and Hall (2003) and the demise of performance funding in Illinois, Washington and Florida reported by Dougherty and Natow (2009).

## The policy incentive mechanism

Understanding the basic incentive mechanism of the policy may be advanced by examining a hypothetical example of how the policy works in practice. Suppose that First Rate College, a hypothetical public college in Tennessee, has an educational and general appropriations recommendation of USD 20 million derived from an enrolment-driven formula funding policy, which recognises enrolment by level of programme and type of programme. The maximum performance funding amount available to First Rate College would be 2% of USD 20 million, or USD 400 000. In other words, if First Rate College had absolutely perfect scores on each of the five performance indicators, its final appropriation recommendation to the Tennessee Legislature and governor would be USD 20.4 million.

During the pilot implementation of the Tennessee Performance Funding Policy, five performance indicators were identified and standards of performance for each of these five indicators were developed. Scoring protocols for the original five indicators are outlined in the original project report (Bogue and Troutt, 1980). Consider now this hypothetical score profile for First Rate College against the five indicators (Table 1).

Table 1. **A perfect, hypothetical score profile**

| Performance standards | Maximum points | Recommended points |
|---|---|---|
| Accreditation | 20 | 10 |
| General education outcomes | 20 | 15 |
| Major field outcomes | 20 | 10 |
| Peer evaluation of academic programmes | 20 | 10 |
| Student/alumni evaluation | 20 | 10 |
| Total | 100 | 55 |

Added to the basic formula, appropriations recommendations of USD 20 million for First Rate College would be an amount equal to 55% of USD 400 000 or USD 220 000, making a total appropriation recommendation of USD 20.22 million.

It is important to note that the principal policy accent in the pilot phase was to use the power of fiscal policy to call institutions to more assertive performance assessment efforts – **without the state specifying or mandating an assessment instrument.**

## Evolution of policy indicators and standards

The Tennessee Performance Funding Policy was established to engage questions of educational and instructional performance and not performance in research and public service missions. As we venture into the audit analysis of

the policy over its history, a first observation is that the performance indicators and standards have changed over the years. Table 2 provides a quick summary of how the standards profile appeared in the pilot years (1979-82) and in the most recent cycle (2005-10). The following commentary provides a broad overview of changes in the standards, followed by more specific details:

1. The number of standards has changed, moving from the original five to ten in the 1980s and back to five in the period 2005-10.
2. The initial set of standards for all campuses evolved to a set that allows some variance by campus mission (*e.g.* four-year and two-year institutions).
3. The evaluation of performance shifted from the original accent on improvement – an internal criterion – to comparative examinations of performance against institutions of similar mission.
4. The relative importance or weight of a standard may have shifted. As more institutions, for example, begin to achieve full accreditation for their academic programmes (Table 4), at or approaching 100% for most schools, the accent on that standard was lowered.
5. The accent on goal achievement, both institutional and state, was added, and an accent on what institutions did (decision and policy affected) with what they learned from assessments was added in the more recent two cycles.

The original five standards called for a more assertive initiative on measuring general education outcomes. As earlier noted, however, no common assessment was mandated or specified. In 1979-80, all public institutions began using ACT COMP (American College Testing College, Outcome Measures Program), which was one of only two or three assessments for general education available at that time. Now, institutions are using a variety of general education assessments that include the ETS Measure of Academic Proficiency and Progress (MAPP), College Base, California Critical Thinking Skills Test (CCTST) and the ACT WorkKeys assessment.

An explanation of the scoring protocols for the performance standards may be appropriate here. First, institutions are not in competition with one another and are not scored against one another. Thus, each institution has the opportunity to earn 100 points, as previously illustrated, on criterion referenced benchmarks. With the exception of Standard 5, each performance indicator is objectively scored by a set of established criteria that determine the points awarded. In the case of the "assessment pilot" and "assessment implementation," evaluations and points awarded are determined by an evaluation committee composed of faculty and staff from the institutions, the two governing boards and the Tennessee Higher Education Commission. These scoring protocols may be accessed online.*

* See: *http//tn.gov/thec/Divisions/AcademicAffairs/PerformanceFunding.*

Table 2. **Performance funding standards**
Pilot years (1979-82) and current cycle (2005-10)

| Performance standards pilot cycle (1979-82) | | Points awarded |
|---|---|---|
| **Standard 1** | Programme accreditation | 20 points |
| **Standard 2** | Graduate performance in major fields | 20 points |
| **Standard 3** | Graduate performance on general education | 20 points |
| **Standard 4** | Evaluation of institutional programmes/services by students/alumni | 20 points |
| **Standard 5** | Peer evaluation of academic programmes | 20 points |

| Performance standards sixth cycle (2005-10) | | Community colleges | Universities |
|---|---|---|---|
| **Standard 1** | Student learning environment and outcomes | | |
| | Student learning: general education | 15 | 15 |
| | Student learning: major field assessment | 10 | 10 |
| | Accreditation | 5 | 5 |
| | Programme review | 5 | 10 |
| **Standard 2** | Student, Alumni and Employer Surveys | 10 | 10 |
| **Standard 3** | Student persistence (retention and graduation) | 15 | 15 |
| **Standard 4** | State Master Plan priorities | | |
| | Institutional strategic planning goals | 5 | 5 |
| | State strategic planning goals | 10 | 10 |
| | Transfer and articulation | – | 5 |
| | Job placement | 10 | – |
| **Standard 5** | Assessment outcomes | | |
| | Assessment pilot (Delaware/Kansas Cost Study) | 5 | 5 |
| | Assessment implementation | 10 | 10 |

The following commentary outlines a summary of major changes in the policy standards and scoring protocols over the years.

### *Accreditation*

**Point value**

1978-82: 20 points

2005-10: 5 points

Throughout the life span of the Performance Funding Policy accreditation has been one of its core elements, assisting institutions not only to achieve accreditation but to maintain it. The point value assigned to accreditation signified the importance placed on quality assurance and as institutions began to effectively maintain accreditation (including achieving accreditation for new programmes), the point emphasis declined.

For the 1997-2000 cycle, point differentiation by institutional type was introduced, with universities receiving 15 points and community colleges receiving 10 points for achieving accreditation for all programmes.

### *General education*

**Assessment options**

1978-92: Single test

1992-2000: Two tests

2000-10: Three or more tests

Recent performance funding cycles have reflected the increased availability of appropriate assessments for the general education programme. For over a decade there were very few assessments available other than ACT COMP and the Academic Profile was developed by the Educational Testing Service. However, as from 1992, the College Basic Academic Subjects Examination (College BASE) became an alternative to the ACT COMP. Effective with the 2000 cycle, institutions could select from the College BASE, California Critical Thinking Skills Test, Measure of Academic Proficiency and Progress and WorkKeys.

With the 2000-05 cycle, institutions could switch to a different general education assessment beginning with the third year of the cycle. This option provided institutions an opportunity to pilot different general education assessments.

### *Major field assessment: licensure programmes*

The assessment of graduates' performance in academic programmes has always been a part of the performance funding programme. Beginning with the 1987 cycle, selected professional fields by institutional type were assessed twice during the five-year cycle. Universities were required to report on nursing, teacher education, engineering and accounting. Community colleges reported on nursing, allied health and engineering technology. For the next three cycles, licensure programmes – along with other undergraduate programmes – were only assessed once during the five-year cycle. With the increased scrutiny on graduates' performance, the standards were modified in 2005 to report annually on all licensure programmes.

### *Alumni/student satisfaction*

**Student and alumni surveys**

1978-96: Locally developed student and alumni surveys

1997-99: ACT Student and alumni surveys

2000-05: Locally developed student and alumni surveys

2005-10: National Survey of Student Engagement (NSSE) and alumni survey aligned with NSSE

The provision for an alumni survey in the original and subsequent five cycles featured efforts to acquire "customer/client" opinions from graduates only. Now the standard rotates among enrolled student surveys, alumni surveys and employer surveys.

### *Retention and persistence*

**Scoring options**

1992-97: Goals set by institution (10 points)

2000-05: Compared with prior performance and state (10 points)

2005-10: Compared with prior performance and benchmarked with funding peers (15 points)

Student retention and persistence-to-graduation rates are among the most commonly used indicators in higher education. In the 1992 cycle, evaluation was based on the institution's progress towards retention and graduation goals that were set by each institution. With institutions setting very deliberate and achievable goals, the scoring option was modified in the 2000 cycle, and student success goals were compared with prior performance as well as the overall state goals.

To further encourage institutions to focus their efforts on retention and graduation rates, for the 2005 cycle an institution's performance is compared with its funding peers. The funding formula for distributing state dollars was based on funding faculty salaries based on their funding peers. This alignment of the funding formula with performance funding was a significant policy change for higher education in Tennessee.

### *Assessment outcomes*

**Focus**

1980-82: Evaluation planning/action for renewal and improvement

1982-87: Institutional improvement plan

1993-97: Improvement action

2000-05: Assessment implementation

2005-10: Assessment implementation (faculty per teams)

Throughout the performance funding programme, the focus has been on instructional improvement and faculty participation. Early standards encouraged campuses to furnish evidence of faculty participation in the development, implementation and use of assessments. With the regional accrediting agency focused on institutional effectiveness in the mid-1980s, incentives were provided for institutions to document quality and effectiveness by employing a comprehensive system of planning and evaluation for every major aspect of the institution that was impacted by performance funding. The 2005 cycle encouraged institutions to focus on student learning outcomes through their Quality Enhancement Plan (accrediting agency requirement) or through an institutional Student Learning Initiative.

## Institutional history of points and dollars earned

As noted earlier, the philosophy behind the policy was that small rudders can move large ships. During the first iteration of the policy in 1978-82, the University of Tennessee at Knoxville, the largest institution in the state, could have earned approximately USD 1.0 million beyond its basic formula funded appropriation request (see the allocation mechanism outlined earlier). In more recent years, the amount available on the policy for this institution would be closer to USD 8 or 9 million. As reflected in Table 3, these fiscal amounts are enough to attract institutional attention.

The policy does not appear to favour institutions in relation to the Carnegie Classification, as both four-year and two-year institutions have been high and low scorers over the life of the policy. Moreover, for any of the five-year cycles depicted in Table 3, high and low scores have tended to fluctuate among different schools.

Following the early implementation years (the "shakedown" years of the policy), almost all institutions have performed at higher levels, achieving scores in the 80%-90% range. One can see this movement very clearly when one looks at the scores on accreditation. In the first years of the policy, the percentage of accredited programmes averaged around 80% and that figure is now 100%, with two exceptions at 98%. Before the design work started on the policy in the mid-1970s, the accreditation figure would have been closer to 66%, or two-thirds of eligible programmes accredited.

## Evidence of policy impact and effectiveness

Has the Performance Funding Policy proved effective? Has the performance of Tennessee's public colleges and universities improved? These questions will be engaged from multiple perspectives and evidence sources. The policy's persistence for over 25 years may be accepted as partial evidence of its effectiveness, although longevity is not an infallible indicator of policy merit. However, the longevity of the policy under changing political climates and budget conditions offers additional evidence of its robustness and the increase in funding percentage represents endorsement of its effectiveness. Clearly, the wisdom of allocating some state funds on a performance criterion has been demonstrated.

A secondary goal of the policy effort was to demonstrate an accountability initiative by the higher education community so that political officials would not impose external accountability measures on higher education. This initiative has also been successful, as there are no statutory mandates for assessment. Some additional data points on performance are given in Table 3.

Table 3. **A 25+year history of performance funding points and dollars**

| Institution | 1978-82 | | 1982-87 | | 1987-93 | | 1993-97 | | 1997-2000 | | 2000-05 | | 2005-10 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Avg. points | Total USD | Avg. points | Total USD | Avg. points | Total USD | Avg. points | Total USD | Avg. points | Total USD | Avg. points | Total USD | Avg. points | Total USD |
| Austin Peay | **56** | 352 428 | **94** | 2 592 534 | **78** | 3 263 365 | **90** | 5 189 253 | **92** | 3 484 330 | **95** | 8 273 316 | **88** | 6 221 714 |
| East Tennessee | **44** | 568 984 | **86** | 4 632 841 | **81** | 6 811 325 | **85** | 8 570 113 | **95** | 6 172 453 | **98** | 14 495 022 | **96** | 10 989 211 |
| Middle Tennessee | **61** | 878 976 | **90** | 5 948 048 | **76** | 8 181 453 | **90** | 12 788 952 | **97** | 9 900 838 | **95** | 22 980 284 | **95** | 19 021 135 |
| Tennessee State | **45** | 521 661 | **84** | 3 592 708 | **51** | 2 978 562 | **80** | 5 622 167 | **90** | 4 202 454 | **86** | 8 283 684 | **81** | 5 837 225 |
| Tennessee Tech | **72** | 789 099 | **98** | 5 136 264 | **84** | 6 525 823 | **93** | 8 050 890 | **92** | 5 000 132 | **96** | 11 332 121 | **96** | 8 520 971 |
| Univ. of Memphis | **61** | 1 578 081 | **91** | 10 743 739 | **80** | 14 238 431 | **90** | 18 502 259 | **89** | 11 572 751 | **93** | 27 881 676 | **88** | 20 300 974 |
| UT Chattanooga | **63** | 560 278 | **87** | 3 557 180 | **79** | 4 670 112 | **92** | 6 533 513 | **96** | 4 725 759 | **94** | 10 159 202 | **94** | 8 049 639 |
| UT Knoxville | **75** | 3 261 881 | **99** | 19 137 613 | **84** | 23 710 066 | **89** | 28 970 873 | **98** | 20 125 447 | **97** | 43 932 856 | **93** | 34 486 316 |
| UT Martin | **65** | 477 541 | **91** | 2 925 204 | **77** | 3 470 876 | **87** | 4 751 459 | **97** | 3 389 852 | **98** | 7 558 161 | **91** | 5 524 280 |
| **Universities** | | **8 988 929** | | **58 266 131** | | **73 850 013** | | **98 979 479** | | **68 574 016** | | **154 896 323** | | **118 951 465** |
| Chattanooga | **50** | 193 008 | **91** | 1 627 585 | **84** | 2 685 522 | **87** | 3 694 427 | **91** | 2 556 443 | **91** | 5 315 646 | **90** | 4 118 392 |
| Cleveland | **57** | 161 246 | **90** | 1 013 639 | **73** | 1 129 126 | **88** | 1 674 507 | **95** | 1 177 326 | **97** | 2 530 565 | **94** | 1 839 268 |
| Columbia | **62** | 125 458 | **93** | 813 589 | **95** | 1 424 127 | **96** | 1 922 715 | **98** | 1 447 560 | **92** | 3 129 844 | **92** | 2 496 986 |
| Dyersburg | **27** | 30 097 | **94** | 527 284 | **82** | 725 757 | **86** | 980 122 | **95** | 746 569 | **93** | 1 741 067 | **92** | 1 429 521 |
| Jackson | **69** | 146 442 | **97** | 891 125 | **76** | 1 131 219 | **86** | 1 614 382 | **92** | 1 211 373 | **90** | 2 850 753 | **88** | 2 191 429 |
| Motlow | **67** | 114 264 | **95** | 704 247 | **85** | 1 055 179 | **95** | 1 576 937 | **96** | 1 086 077 | **95** | 2 499 908 | **93** | 2 124 213 |
| Nashville | **58** | 191 770 | **100** | 1 455 401 | **82** | 1 633 040 | **85** | 1 910 020 | **98** | 1 305 256 | **91** | 3 511 182 | **95** | 3 212 203 |
| Northeast | **12** | 14 700 | **88** | 637 644 | **84** | 948 277 | **90** | 1 584 319 | **89** | 1 381 948 | **97** | 3 133 586 | **93** | 2 755 168 |
| Pellissippi | **34** | 58 493 | **84** | 695 753 | **81** | 1 759 759 | **89** | 3 089 343 | **96** | 2 241 009 | **95** | 4 964 129 | **92** | 4 045 916 |
| Roane | **64** | 166 456 | **97** | 1 209 117 | **92** | 2 120 846 | **90** | 2 797 022 | **92** | 1 911 377 | **98** | 4 604 976 | **94** | 3 388 998 |
| Southwest | **49** | 469 643 | **97** | 3 733 809 | **81** | 4 657 542 | **87** | 6 863 379 | **80** | 2 465 360 | **93** | 8 375 586 | **82** | 5 515 738 |
| Volunteer | **72** | 175 103 | **100** | 1 069 624 | **89** | 1 572 782 | **94** | 2 547 349 | **94** | 1 954 261 | **95** | 4 477 895 | **91** | 3 406 812 |
| Walters | **48** | 136 710 | **94** | 1 198 726 | **92** | 1 920 956 | **91** | 2 644 351 | **94** | 1 973 235 | **97** | 4 537 244 | **94** | 3 644 743 |
| **Community colleges** | | **1 983 390** | | **15 577 543** | | **22 764 132** | | **32 898 873** | | **21 457 794** | | **51 672 381** | | **40 169 387** |
| **Grand total** | | **10 972 319** | | **73 843 674** | | **96 614 145** | | **131 878 352** | | **90 031 810** | | **206 568 704** | | **159 120 852** |

**Programme accreditation**. As shown in Table 4, campuses have raised the national accreditation of eligible academic programmes from 65% to nearly 100%. Accreditation is, for academics, one of the most distinctive symbols and indicators of quality in American higher education. Even those educators critical of accreditation are usually not willing to remove "bragging rights" from their catalogues, where lists of accredited programmes are often placed. Thus, the academy would consider the results on this indicator as evidence of both educational improvement and meeting a quality criterion.

Table 4. **Percentage of accredited programmes**

| | Pilot 1980-81 | Cycle 1 1982-83 | Cycle 2 1987-88 | Cycle 3 1992-93 | Cycle 4 1997-98 | Cycle 5 2000-01 | Cycle 6 2005-06 |
|---|---|---|---|---|---|---|---|
| Austin Peay | 70 | 80 | 65 | 95 | 100 | 100 | 100 |
| East Tennessee | 70 | 76 | 90 | 64 | 98 | 100 | 100 |
| Middle Tennessee | 90 | 88 | 90 | 100 | 98 | 98 | 98 |
| Tennessee State | 75 | 80 | 65 | 96 | 98 | 98 | 98 |
| Tennessee Tech | 95 | 96 | 85 | 79 | 93 | 100 | 100 |
| University of Memphis | 95 | 100 | 100 | 93 | 100 | 100 | 100 |
| UT Chattanooga | 75 | 80 | 75 | 100 | 100 | 100 | 97 |
| UT Knoxville | 95 | 96 | 100 | 100 | 100 | 100 | 100 |
| UT Martin | 85 | 68 | 65 | 83 | 100 | 100 | 100 |
| **Universities** | **83** | **85** | **82** | **90** | **99** | **100** | **99** |
| Chattanooga | 100 | 100 | 80 | 100 | 100 | 100 | 100 |
| Cleveland | 70 | 80 | 100 | 100 | 100 | 100 | 100 |
| Columbia | 50 | 84 | 100 | 100 | 100 | 100 | 100 |
| Dyersburg | 0 | 100 | 100 | 100 | 100 | 100 | 100 |
| Jackson | 100 | 100 | 65 | 100 | 100 | 100 | 100 |
| Motlow | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Nashville | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Northeast | 65 | 76 | 65 | 100 | 100 | 100 | 100 |
| Pellissippi | 100 | 80 | 65 | 100 | 100 | 100 | 100 |
| Roane | 100 | 80 | 100 | 100 | 100 | 100 | 100 |
| Southwest | 83 | 92 | 100 | 100 | 100 | 100 | 100 |
| Volunteer | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| Walters | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| **Community colleges** | **82** | **92** | **90** | **100** | **100** | **100** | **100** |

**General education assessment.** When work on the policy began, only two public institutions in Tennessee were involved in any assessment of general education. Today, all institutions have accepted methods of evaluation. Table 5 shows recent data for institutions. While there is some movement, in general the score patterns have remained relatively stable, with institutional performances in most cases slightly exceeding national peer performance.

Table 5. **General education: outcome average and comparison**

| Institution | 2005-06 | | 2006-07 | | 2007-08 | |
|---|---|---|---|---|---|---|
| | Score | Nat'l avg. | Score | Nat'l avg. | Score | Nat'l avg. |
| | **California Critical Thinking Skills Test (CCTST)** | | | | | |
| East Tennessee | 17.5 | 16.8 | 17.4 | 16.8 | 17.7 | 16.8 |
| Tennessee Tech | 18.6 | 16.8 | 18.9 | 16.8 | 19.4 | 16.8 |
| Univ of Memphis | 18.1 | 16.8 | 17.5 | 16.8 | 17.3 | 16.8 |
| UT Knoxville | 18.8 | 16.8 | 19.4 | 16.8 | 19.9 | 16.8 |
| Chattanooga | 16.1 | 14.8 | 15.9 | 14.7 | 15.4 | 14.7 |
| Cleveland | 15.2 | 14.8 | 15.9 | 14.7 | 15.9 | 14.7 |
| Columbia | 14.9 | 14.8 | 15.2 | 14.7 | 15.4 | 14.7 |
| Dyersburg | 15.6 | 14.8 | 15.4 | 14.7 | 15.1 | 14.7 |
| Nashville | 14.6 | 14.8 | 14.7 | 14.7 | 14.8 | 14.7 |
| | **Measure of Academic Proficiency and Progress (MAPP)** | | | | | |
| Austin Peay | 446.8 | 448.0 | 446.5 | 448.5 | 446.0 | 447.9 |
| Middle Tennessee | 449.1 | 451.8 | 446.8 | 451.3 | 18.0 | 16.8 |
| Tennessee State | 438.6 | 451.8 | 435.3 | 451.3 | 432.7 | 450.8 |
| UT Martin | 450.6 | 448.0 | 445.4 | 449.3 | 447.6 | 447.9 |
| Motlow | 440.6 | 440.8 | 443.7 | 440.6 | 443.3 | 440.5 |
| Northeast | 443.6 | 440.8 | 440.5 | 440.6 | 442.5 | 440.5 |
| Roane | 442.9 | 440.8 | 442.6 | 440.6 | 441.4 | 440.5 |
| Volunteer | 441.8 | 440.8 | 442.6 | 440.6 | 443.7 | 440.5 |
| | **College Basic Academic Subjects Examination (College BASE)** | | | | | |
| Jackson | 275.0 | 275.0 | 275.0 | 277.0 | 274.0 | 278.0 |
| Southwest | 243.0 | 275.0 | 239.0 | 277.0 | 247.0 | 278.0 |
| Pellissippi | 279.0 | 275.0 | 279.0 | 277.0 | 276.0 | 278.0 |
| | **Collegiate Assessment of Academic Proficiency (CAAP)** | | | | | |
| UT Chattanooga | 62.1 | 61.8 | 62.3 | 61.7 | 62.0 | 61.5 |

While all institutions are engaged in general education assessment, the decision impact of the assessment is not uniform. That is, for some institutions, the assessment is derived from a sample of senior students, but no decisions about the general education curriculum/programme or student progress or degree qualification are affected.

**Alumni and student satisfaction**. The Alumni Survey is conducted twice during the five-year cycle. Early in the history of the policy, the instrument used to assess alumni was a locally developed instrument that permitted comparisons only with other institutions in the State of Tennessee. In the fourth cycle (1997-1998), the ACT Alumni Opinion Survey was used but was abandoned in the 2000-05 cycle due to an extremely low response rate. Beginning with the sixth cycle (2005-10), the Alumni Survey was aligned with

Table 6. **Alumni Survey: students' educational experiences**[1]

| | 2001-02 | 2004-05 | 2006-07 |
|---|---|---|---|
| Austin Peay | 3.30 | 3.31 | 3.27 |
| East Tennessee | 3.24 | 3.26 | 3.31 |
| Middle Tennessee | 3.28 | 3.28 | 3.39 |
| Tennessee State | 3.13 | 3.11 | 3.05 |
| Tennessee Tech | 3.42 | 3.48 | 3.55 |
| Univ of Memphis | 3.12 | 3.15 | 3.24 |
| UT Chattanooga | 3.17 | 3.21 | 3.27 |
| UT Knoxville | 3.21 | 3.22 | 3.34 |
| UT Martin | 3.41 | 3.43 | 3.49 |
| Chattanooga | 3.44 | 3.47 | 3.50 |
| Cleveland | 3.29 | 3.39 | 3.52 |
| Columbia | 3.34 | 3.39 | 3.52 |
| Dyersburg | 3.33 | 3.50 | 3.43 |
| Jackson | 3.50 | 3.42 | 3.55 |
| Motlow | 3.60 | 3.47 | 3.56 |
| Nashville | 3.63 | 3.59 | 3.41 |
| Northeast | 3.49 | 3.41 | 3.61 |
| Pellissippi | 3.33 | 3.57 | 3.50 |
| Roane | 3.48 | 3.53 | 3.52 |
| Southwest | 3.37 | 3.36 | 3.45 |
| Volunteer | 3.38 | 3.48 | 3.56 |
| Walters | 3.47 | 3.47 | 3.54 |

1. In response to the question How satisfied are you with the educational experience you received? Likert scale: *i)* very dissatisfied; *ii)* dissatisfied; *iii)* satisfied; and *iv)* very satisfied.

questions from the National Survey of Student Engagement to allow survey comparisons between responses from students and alumni (Table 6).

The "financial bite" and importance of this indicator in the middle years of the policy can be illustrated as follows. In 1995, for example, the enrolled student satisfaction scores for the University of Tennessee at Knoxville earned the university only one point on a ten-point scale. As a result, the University's appropriations funding recommendation was approximately USD 500 000 below its potential award of USD 6 million from performance funding. Even with a very large budget, half a million dollars is enough to get attention.

**Persistence to graduation**. Table 7 presents persistence to graduation rates for public universities and two-year colleges. Evaluation on this standard is based on the extent to which institutions achieve state-wide goals set for persistence to graduation. The state goals for universities and community colleges are 51% and 35% persistence-to-graduation rates respectively. The overall statistics suggest a slight improvement for universities and two-year colleges.

Table 7. **Persistence to graduation rates (%)**

| Freshmen cohort year | Universities | Community colleges |
|---|---|---|
| 1985 | 43.1 | 25.0 |
| 1986 | 42.9 | 25.2 |
| 1987 | 43.3 | 26.9 |
| 1988 | 44.5 | 26.3 |
| 1989 | 46.1 | 25.3 |
| 1990 | 45.4 | 25.9 |
| 1991 | 44.2 | 22.3 |
| 1992 | 44.9 | 22.2 |
| 1993 | 45.4 | 21.9 |
| 1994 | 47.0 | 22.7 |
| 1995 | 47.9 | 24.3 |
| 1996 | 49.0 | 24.0 |
| 1997 | 48.7 | 23.8 |
| 1998 | 49.2 | 25.1 |
| 1999 | 49.8 | 30.5 |
| 2000 | 50.5 | 31.0 |
| 2001 | 49.3 | 31.2 |
| 2002 | 50.4 | 31.0 |

**Job placement rates**. Job placement rates for two-year colleges, based on a survey of graduates over a one-year period after graduation, appear in Table 8. Evaluation on this standard is based on job placement for each career programme. Statistics for individual campuses show both stable and high employment rates.

Table 8. **Job placement rates (%)**

| Academic year | Placement rate |
|---|---|
| 1993-94 | 90 |
| 1994-95 | 92 |
| 1995-96 | 92 |
| 1996-97 | 92 |
| 1997-98 | 90 |
| 1998-99 | 94 |
| 1999-00 | 90 |
| 2000-01 | 89 |
| 2001-02 | 90 |
| 2002-03 | 90 |
| 2003-04 | 91 |
| 2004-05 | 92 |
| 2005-06 | 92 |
| 2006-07 | 93 |
| 2007-08 | 92 |

## Survey and case study evidence

Over 1999/2000, five doctoral students at the University of Tennessee conducted case studies to explore the impact of performance funding at a doctoral research university, a doctoral university, a comprehensive university and two community colleges. A sixth student conducted a qualitative study among major educational and civic leaders in relation to the policy. These case studies were designed to probe more deeply the influence of performance-funding policy at the campus level. A summary of findings follows, with more extended results to be found in each of the original case study reports.

1. In interviews of some 30 executive-level college administrators and government officials in Tennessee, Russell (2000) found that respondents attributed the long life of the Tennessee Performance Funding Policy to its original and continuing "ownership" by both campus and government officials.
2. Hall's case study (2000) of the University of Tennessee, Knoxville, found that interest in performance funding had waned over its quarter-century history, that awareness of policy intent and method centred primarily at the administrative level (vice-chancellor and above), and that a decade of modest financial support for higher education in Tennessee had caused administrators to concentrate on points and dollars rather than on instructional improvement. For example, the University of Tennessee has required in recent years that a sample of its graduating seniors take the College BASE general education assessment in response to the long-standing indicator in the Tennessee performance-funding policy. However, no decisions related to the academic diagnosis, progress, or degree certification of any student is based on this assessment, and no general education requirement appears based on the test results.
3. Latimer's case study (2001) of the University of Memphis, a doctoral research university, also uncovered the lack of awareness of the details of performance funding at levels other than the senior administration.
4. Lorber (2001) examined the impact of the Tennessee Performance Funding Policy at Tennessee Technological University (TTU), one of the ten pilot institutions involved in the original developmental work on the policy. He found few significant educational policy changes had occurred at TTU as a result of performance funding. But the campus respondents suggested that the policy had prepared the university for the interest on effectiveness and outcomes assessment that emerged in recent years from both regional and programme accreditation agencies.
5. In a study of performance-finding impact at Volunteer State Community College, Freeman (2000) also found that executive level administrators were more aware of the policy than division chairs and faculty, and that faculty members did not perceive a close link between the data derived from various

assessments and their needs in instruction. Still, none of those interviewed suggested dropping the policy. Most also seemed pleased that Tennessee had taken a lead role in this accountability and assessment effort. Freeman also found that in recent years, as state funding lagged, administrative concern centred more on maximising dollar return on the policy.

6. Shaw (2000) undertook the second case study involving a community college, Walters State Community College (WSCC). The performance-funding policy is part of a larger campus effort to build a culture focused on continuous improvement, and the institution's president, who has been in office for more than a quarter century, emphasises this culture. There is a 46-member Strategic Planning and Continuous Improvement Council on the WSCC campus. One of the findings of this case study echoed findings of other case studies. Early participation in the Tennessee performance-funding venture prepared WSCC well for the change in regional accreditation standards of the Commission on Colleges of the Southern Association of Colleges and Schools, which shifted from process-oriented standards to standards focused on assessment of educational outcomes and applying the results for institutional improvement.

Many of the themes found in these five case studies were affirmed by a more recent qualitative study conducted by three doctoral students at Vanderbilt University (Baxter *et al*., 2007). Two surveys have been conducted that speak to the effectiveness of the Tennessee policy. One was reported by Banta *et al*. in 1996 and a second by Burke and Associates in 2002.

## Reconciling improvement and accountability: a summary

The record supports several affirming conclusions about performance funding in Tennessee. First, the policy has been in operation for almost thirty years, which suggests continuing support from a succession of political and educational leaders. Second, periodic policy reviews by panels of campus, governing board, and co-ordination commission representatives have added new ideas and encouraged a sense of ownership that have contributed to its longevity. And finally, the policy remains in effect while policies in other states have been abandoned.

Tennessee now has in place an extensive array of performance indicators and trend lines not present in 1980, furnishing the state and its higher education community an important source of operational and strategic performance intelligence. While some of the direct performance assessments – general education assessments, for example – do not reveal dramatic improvement in student performance, they do reveal favourable results when compared to national norms. In relation to programme accreditation – another key indicator of both institutional and programme quality, virtually 100% of

community colleges and universities have achieved this goal. From few campuses doing any educational assessment in the opening years of performance funding, all institutions now have active assessment programmes.

Some important liabilities remain. Some assessments are clearly conducted mostly to satisfy the policy and have little or no relation to student decisions or programme orientations. In some cases, the policy does not adequately penetrate to the department and programme level, and performance results are often not used for decisions on programme improvement or for student placement and progress. In pleasant contrast is the recent implementation of academic audit processes for programme improvement in the 19 institutions operated by the Tennessee Board of Regents System. The particulars of that venture have been nicely captured in *Academic Quality Work* (Massy *et al*., 2007).

While accountability policy has had a constructive effect on performance evidence in United States higher education, there will continue to be differences over stakeholder expectations of higher education (its mission and purposes) and differences over credible evidence for demonstrating accountability (indicators of fiscal responsibility and educational outcomes). The decision to start colonial colleges in the early history of the United States was religiously inspired to keep the Devil at arm's length and was not a cost benefit or performance accountability decision. The current value placed on higher education as a guarantor of liberty, a foundation of an open and transparent society, and an enemy of tyranny is not a cost-benefit decision either. Cultures of evidence and cultures of faith will continue to be complementary and essential principles in the health and performance of American higher education.

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# The facilitation of collaborative learning: what works?

*by*
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*The better management of group dynamics is increasingly being recognised as crucial for the success of inquiry-based curricula. This paper explores a number of issues surrounding the management of group dynamics in collaborative learning settings in medical education at the University of New South Wales, Australia. The findings of a study conducted there provide a practical framework for the identification of common problems that can confront facilitators, as well as a range of strategies that have been found by experienced facilitators to be useful in managing these issues. The strategies are discussed within the conditions in which they have been found to be effective, and facilitators are alerted about the possible pitfalls associated with these strategies. Thus, the paper provides insights into a key aspect of the collaborative learning and teaching process and the student behaviours that impact on it. It proposes practical strategies that can inform staff development activities, and is a starting point for developing quality teaching support.*

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# L'apprentissage collaborative : qu'est-ce-qui marche ?

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*Une meilleure gestion de la dynamique de groupe est de plus en plus reconnue comme un critère essentiel au succès des curriculums basés sur des enquêtes. Cet article aborde un certain nombre de problèmes liés à la gestion de la dynamique de groupe dans les filières médicales à l'Université de New South Wales, Australie. Les résultats d'une enquête menée permettent de fournir un cadre pratique à l'identification de problèmes courants auxquels peuvent être confrontés les formateurs, ainsi que des stratégies trouvées par des formateurs expérimentés, et utiles à la résolution de ces problèmes. Les stratégies sont abordées dans les conditions dans lesquelles elles sont efficaces, et les formateurs sont avertis sur les embûches possibles associées à ces stratégies. Ainsi, l'article émet des avis sur l'aspect-clé d'un apprentissage collaboratif et d'un processus d'enseignement et des comportements des étudiants qui ont un impact sur celui-ci. Il propose des stratégies en matière d'activités de développement du personnel et constitue un pont de départ pour la mise en place d'un soutien à l'enseignement de qualité.*

## Introduction

This paper explores a number of issues surrounding the management of group dynamics in small group learning settings. The findings of a study as well as the literature (Berkel and Dolmans, 2006; Rolfe *et al*., 1997; Hitchcock and Anderson, 1997) have revealed that this is an area of great concern for many facilitators of small group learning. The study reported in this paper focused on the support needs of small group facilitators. Its findings clarify how different types of student behaviour impact on group dynamics and identify facilitation strategies that could be useful in these specific situations. The findings also highlight the context-specific nature of these facilitation strategies and illustrate how the strategies would succeed only if implemented within appropriate conditions.

## Background

Recent reform in medical education has given rise to a new generation of medical curricula that can broadly be termed inquiry-based curricula. Included within this broad category are curricula based on the problem-based learning (PBL) model as well as many variants of this model including the scenario-based curriculum used at the University of New South Wales (UNSW), Australia. Small group learning and teaching activities are a feature common of most inquiry-based curricula, and often constitute a vital component of the learning and teaching process (Berkel and Dolmans, 2006). The success of inquiry-based curricula therefore depends to a great extent on the success of the small group learning process. A study conducted at the University of Maastricht (Berkel and Dolmans, 2006, p. 736) concluded that "… the success of PBL appears to depend strongly on tutors' competencies, the quality of the PBL problems and group functioning". However, there have been conflicting reports on the effectiveness of small group learning within these curricula. Miflin (2004) cites work by Rolfe *et al.* (1997), which suggest that the actions of some students had the effect of raising the anxiety levels of their small groups, and work by Hitchcock and Anderson (1997, p. 19), which suggest that certain types of behaviour could "actually harm individuals and the learning climate". Other studies also draw attention to the issue of dysfunctional groups which hinder the achievement of the objectives of small group learning (De Grave *et al.*, 2002). The problematic relationship between inquiry-based curricula and the small group learning process is highlighted by

Norman (2001, p. 820), who considers that dysfunctional groups are the "Achilles' heel of PBL".

Medical educators have responded to this challenge by analysing the issues that influence group dynamics (Miflin, 2004; Berkel and Dolmans, 2006). This work has better defined the nature of the problem, and has highlighted the need to train both facilitators and students to deal with dysfunctional groups (Hitchcock and Anderson, 1997; Tipping *et al.*, 1995; De Grave *et al.*, 2001, cited by Miflin, 2004; Berkel and Dolmans, 2006).

A number of studies have examined how specific types of student behaviour contribute to dysfunctional groups. De Grave *et al.* (2002) categorised undesirable types of student behaviour into six categories that they named "success inhibitors." These were: lack of elaboration, lack of interaction, unequal participation, lack of cohesion, difficult personalities and lack of motivation. They concluded that all potential success inhibitors play a role in explaining dysfunctional tutorial groups. However, motivational influences seemed to have a particularly strong impact on tutorial group function (De Grave *et al.*, 2002).

A range of studies have highlighted the need for a better understanding of how to manage group dynamics in small group settings (Berkel and Dolmans, 2006; Bowman and Hughes, 2005; Maudsley, 1999). Other studies have attempted to develop strategies to deal with the various types of student behaviour. Azer (2005) emphasised the role of strategies – for promotion of group dynamics, solving problems (conflict) within the group, and providing feedback that builds up the group – in increasing the effectiveness of small group facilitation. Holen (2000) emphasised the role of self-reflection and feedback in the development of positive group dynamics. He also discussed the need for dealing with the disruptive behaviour of individual students, and suggested that the solution may lie in understanding the reasons for this behaviour and in encouraging the students to express their frustration in a reflective manner.

The studies cited above provide a brief insight into the wide range of research that has been done – and is being conducted – to address the important questions around the management of group dynamics. In spite of this work, there still appears to be significant concern amongst both teachers and students regarding dysfunctional groups and how to respond to them.

## Aims of the study

The study described in this paper had two major aims. Firstly, it aimed to identify areas in which facilitators required further support or skill development to foster a more productive small group learning environment. Secondly, it sought to identify specific strategies that individual facilitators

had found to be effective in encouraging a more productive small group learning environment. However, it was recognised that strategies that are effective in one context may not be as effective in others, so the study also focused on clarifying the context and conditions within which a particular strategy was likely to succeed.

## Setting

The research was set within Phase I (years 1 and 2) of the undergraduate medicine curriculum at the University of New South Wales, Australia, which is designed on a principle known as scenario-based learning. A detailed discussion of this programme is beyond the scope of this article, and the programme has been described in detail by McNeil *et al*. (2006). This programme is one of the more recent innovations that come under the broad category of inquiry-based curricula in medicine, and includes a significant amount of small group learning and teaching. These small group learning settings are referred to as scenario-group sessions (SGS) and occur twice a week as two-hour sessions. Within these sessions, small groups of students engage in a wide range of collaborative learning activities that are facilitated by a scenario group facilitator. A typical scenario group will include 12 to 14 students, and they will remain as a group for a period of one year. Facilitation is undertaken by academics from a wide range of specialties in medicine or other health-related professions. A significant number of facilitators were trained before the commencement of the programme, and there are regular training programmes for academics who wish to join the group of facilitators. Facilitators typically work with one group of students over one or two eight-week courses.

## Methods

The study included a survey that was followed by in-depth interviews with facilitators. The survey instrument was sent out via email to all small group facilitators (n=80) who had facilitated in Phase 1 of the medicine programme. Facilitators were asked to share their experience of small group facilitation in the programme, to identify areas in which they required further support or skills development and to discuss the strategies that they found to be effective.

An interview guide was developed based on the themes that emerged from the surveys. Facilitators were invited to participate in semi-structured interviews, and ten facilitators agreed to do so. These interviews further explored issues around the strategies that had been identified in the survey and also helped to clarify the specific training needs of small group facilitators. A thematic analysis of the interview findings was conducted.

## Results and discussion

Analysis of the survey and interview findings revealed a number of interesting issues around the facilitation of small group learning. The major issues that emerged can be categorised under the broad headings of "support needs of facilitators" and "effective facilitation strategies". Within the category of "support needs" the management of group dynamics was identified as the predominant area, and this paper will focus on that aspect of the findings. Facilitators sought more support to develop skills to deal with a range of student behaviours that impact on group dynamics. These behaviours and strategies – that may help deal with these behaviours – are discussed below. The facilitators have been de-identified, and codes (*e.g.* FPP-01, FPP-03) are used when attributing quotes to them.

## Types of student behaviour that impact on group dynamics

### *The dominant students*

Facilitators identified the management of "dominant students" as a challenge that they commonly face. While dominance was generally regarded as behaviour to be discouraged, the range of behaviours that were described suggested that there were two separate types of dominant behaviour. While one type of dominant behaviour was found to be disruptive, the other type appeared to have potential to play a positive role in fostering a collaborative learning environment. These two types of behaviour are discussed below.

### *The dominant disruptive students*

Facilitators tended to describe these students using terms such as "immature", "attention seeking" or "lacking in discipline". These students tended to hinder the progress of the group by their desire to speak excessively on irrelevant or marginally relevant issues, and tended to distract the group or take up a disproportionate amount of group time. They were characterised by the facilitators as showing a lack of insight into the disruptive nature of their behaviour, and the negative impact that they were having on the group. One facilitator described how these students used various strategies to "deliberately distract" the group from the aims of the learning activities (FPP-03).

Facilitators also described a more extreme version of disruptive students, and used terms such as "difficult students" and "bad apples" to describe them. They described these students' behaviours as "arrogant" and "disrupting the cohesion of the group". There was a general view that this extreme behaviour occurred less commonly, but when it did, it had a significant impact on the group. There was a view that such behaviour also tended to be "infective" and if not controlled at an early stage, tended to spread wider within the group.

One facilitator described an instance when disruptive behaviour spread to include a number of students who became "disruptive, talking in the background" and reported that it became so difficult that she finally "asked one girl to leave" (FPP-13). Facilitators generally reported this type of behaviour as extremely problematic, and requested more support to develop skills to deal with such situations. One facilitator commented that she needed skills "to control these students" whose behaviour "bordered on disrespectful" (FPP-03).

### *The highly enthusiastic dominant students*

Facilitators tended to describe these students as being "outspoken", but generally spoke of them as having potential to influence the group positively. Although these students are similar to the above students in their tendency to take up a disproportionately large share of the time available for discussion, they differ from the above by their genuine desire to engage with the learning process and by making productive contributions to group discussions. While they may sometimes hinder the collaborative process by their dominance, they could prove to be a useful source of enthusiasm and energy which could trigger more productive discussions. Facilitators described how these students had the potential to take leadership roles within the group, and how they could bring in a sense of humour and enjoyment to the group learning process. However, facilitators cautioned about the need to manage these students in a way that their contributions remained within the boundaries of what is productive for the group. This is exemplified by the comments of one facilitator, who discussed how it was important to "even out the contributions without quashing the energy" that these students brought into the group environment (FPP-03).

### *The apathetic students*

Facilitators described a range of students who came under the broad umbrella of "apathetic students". The descriptions suggested two very different types of apparently apathetic behaviour.

### *The disinterested students*

Facilitators used terms such as "lurkers", "students with negative attitudes" and "lethargic" to describe these students. These students seemed to attend merely to meet attendance requirements, and generally tended to convey the impression that they would rather be elsewhere. They were not only apathetic, but generally found ways to refuse to participate even when specifically allocated a task. One facilitator commented that these students "have impacted on the group so I have pulled them aside individually to address it. I really have to battle complacency" (FPP-12).

### *The quiet students who work by themselves*

Facilitators generally described these students as "quiet", "shy", and "lacking in confidence". Facilitators indicated that they would like to develop skills to draw these students into discussions. There was a general impression that these students could make a useful contribution to the discussions if they could overcome their unwillingness or uncertainty to engage with their peers. While there was concern that these students were not benefiting fully from the collaborative learning sessions, their behaviour was generally not felt to impact significantly on the group process. Facilitators commented that they required skills that would help draw these students out, as well as "techniques to offer these students" (FPP-03), as some of the strategies they had tried had been minimally effective. One facilitator commented that "in trying to bring her out [I] almost embarrassed her" (FPP-03). This facilitator reflected that such an approach would clearly be counter-productive, and emphasised the need for development of better strategies for dealing with these situations.

## Facilitation strategies that may help deal with the above situations

The findings highlighted a range of strategies used by experienced facilitators to deal with the types of student behaviour described above, and thus to foster a more productive learning environment. These strategies and their relevance to managing specific types of student behaviour are discussed below.

### *The allocation of expert roles to students*

Some facilitators described the allocation of expert roles to students as a useful strategy. This involved appointing a student (chosen from volunteers or by using gentle persuasion) as the designated expert to run a specific learning activity during a small group session. The allocation of the role was done in advance, thus providing the student with the opportunity to prepare for his/her role. This was found to be an effective strategy to deal with several types of student behaviours. The first was when dealing with over-enthusiastic students, where this was found to be a useful way of drawing on their strengths while limiting their dominance. One facilitator had commented on how he "put the student in charge" and found that the strategy worked very well because "the dominant person realised the difficulties of facilitation" (FPP-04). However he further commented that this requires careful moderation by the facilitator to ensure that the student does not "use this as an opportunity to misdirect the group" or dominate the discussion even further.

This could also be an effective way to deal with quiet students who tend to work by themselves: these students generally respond very enthusiastically

when provided with the opportunity to prepare in advance and lead a discussion. One facilitator described how this strategy is effective for "quiet but intelligent students" (FPP-14). Thirdly, this could also be a useful way to generate discussion in groups that are generally quiet: this exercise can help students to understand the challenges around generating discussion, and can help them to understand the importance of making contributions to group discussions.

This strategy has been found by facilitators to generally work well, within the condition that adequate support is provided to the student to ensure that the aims of the learning activity are met. This often requires continued involvement of the facilitator to ensure that the discussion stays on track, while allowing the student flexibility to introduce an appropriate level of humour and creativity into the activity. In the absence of appropriate conditions, this strategy could result in the discussions heading in irrelevant directions, lack of control over time, premature closure of discussions or general chaos. It is therefore emphasised that while this is an effective strategy, it is only effective if the appropriate conditions are met.

### *Allowing students to lead an activity*

This is a variation of the above strategy, and differs by being more spontaneous in nature, with minimal opportunity for advance preparation. Facilitators reported how they invited volunteers to lead the discussion or manage a scheduled activity. This can be done on a regular basis in a way that allows each student the opportunity to lead an activity at some point over the duration of a given course. Facilitators emphasised how the strategy could work well if an appropriate match was found between the strengths of the student and the relevant learning activity. They highlighted how the facilitator needs to moderate their own involvement in this strategy, depending on the degree of match between the demands of the learning activity and the skills of the student.

This strategy can be an effective way of developing students' ownership of the small group learning sessions, and to thereby increase levels of student participation. It can be particularly useful in generating discussion in topic areas of personal relevance to the student peer group, since students are often better able to frame questions in ways that engage their colleagues. Examples of this include the discussion of issues around adolescent health, or other discussions that require students to take a moral or ethical standpoint. As a variation of this strategy, it is possible to involve two students with complementary skills or varying viewpoints who could trigger lively debate around relevant topics. This strategy therefore has the potential to minimise many of the above types of undesirable behaviour, and to generally increase the productivity of learning sessions.

### *Pairing students with complementary strengths*

One strategy reported by facilitators was the use of a "buddy system" to pair students with differing and complementary strengths, and ask them to collaborate on certain activities (which they would otherwise do by themselves). For example, when an activity included a period of reflection or problem solving, facilitators had tried pairing a quieter student with a more dominant student, with instructions to discuss the issue and report back, with the quieter student as the designated reporter. Facilitators had also used this system to pair students with strengths in different capabilities (the medicine programme is built around eight graduate capabilities). For example, a student with a sound knowledge of relevant scientific concepts was paired with a student with a known capacity for effective reflection. They reported that this strategy worked well, but required the careful selection of appropriate pairs for appropriate learning activities. They noted that it also demanded a good understanding of the capabilities of all students in the group.

This strategy has the potential to be useful when dealing with dominant and quiet students, as well as when dealing with generally disinterested students. One facilitator also described how he "used members of the group to balance out each others' behaviour" (FPP-04). It is however important to be aware that on some occasions, such pairings can lead to the sharing of undesired behaviour, rather than the desired behaviour as was intended by the strategy.

### *Allocating time for reflection at the end of each session*

Facilitators had found this to be a useful activity that enabled students to reflect on both the content and process of their learning sessions. However, they cautioned that this could become tedious if used excessively, so recommended judicious use on selected occasions only. One facilitator also reported that she "always emphasised at the end of the sessions, the need for reflection" (FPP-14).

This strategy is likely to be effective only if an adequate number of students are willing to reflect in a serious manner. If the students fail to engage with it meaningfully, this strategy could have potentially harmful effects by promoting a superficial view of reflection. When successfully implemented, this strategy has the potential to highlight the strengths and weaknesses of the group process, and could lead to the development of a very productive group. The reflective process has the potential to illustrate the benefits of the inquiry-based process to the disinterested students, who may therefore be motivated to engage more meaningfully with the learning process.

### *Modelling behaviour that is expected of students*

Some facilitators described how they modelled the learning process that they expected from the students. Facilitators found this to be a useful way to demonstrate to the students how the discussion of a scenario could lead to the generation of learning issues that then needed to be followed up and discussed at a subsequent session. They had found this to be an effective way to demonstrate the usefulness of the inquiry-based approach to learning, and had thereby been able to increase the motivation of students.

While this is likely to be useful for the reasons discussed above, a major drawback is the effort and time commitment that is required of the facilitator. It can also result in building unrealistic expectations of the facilitator, including a failure on the part of students to accept responsibility for the process. However, the principle of modelling appropriate behaviour can be more generally useful within the small group environment. Facilitators can model appropriate behaviour, for example, when offering constructive feedback or when demonstrating respect for divergent points of view or ethical standpoints. This was exemplified by the comments of one facilitator, who emphasised how her "own interactions (were) very important for modeling" (FPP-13). However, when using this strategy, care needs to be taken to retain the student-centred nature of the activities, with the facilitator limiting his/her contribution to an appropriate level.

### *Speaking to students individually*

Facilitators suggested that it was important to recognise certain types of behaviour early, and to take appropriate steps before it progresses too far. One facilitator highlighted the importance of acting early, when she commented: "Some groups require a lot of management. Decide on whether the group requires such additional management early on, around the second week. Don't leave it too late" (FPP-02). Many facilitators suggested that often this required them to speak to the student individually. While a range of approaches had been tried, facilitators commented that it was most effective when the issue was flagged and the student was offered a time to discuss the issue with the facilitator. It was generally felt that this strategy was most effective if a meeting was scheduled outside of the small group environment. This is consistent with what has been reported in the literature (Azer, 2005).

Facilitators suggested that this strategy was useful in a number of situations. One was when dealing with the more quiet students. One facilitator reported that he would schedule a meeting and open the discussion with a question such as "When do you find it easiest to contribute?" (FPP-04). He reported that this usually led to a useful exploration of how the student

may engage better with the process, and how the facilitator could provide suitable opportunities for the student to contribute.

### *Other strategies to increase motivation in small group sessions*

Facilitators had used a wide range of strategies to increase motivation within their learning groups. Many of these strategies were characterised by their ability to highlight the relevance of the learning activities to future practice. Examples of these included the use of clinical cases, sharing of personal experiences and the careful introduction of activities in a manner that highlighted their relevance. These strategies were found to be useful in improving the general level of motivation of the group, and were particularly useful in engaging the relatively disinterested students.

## Conclusions

The findings presented above draw links between specific types of student behaviour in small group learning settings, the impact of this behaviour on group dynamics, and strategies that facilitators can use to better manage these group dynamics. It is important to re-iterate that the strategies have been found to be effective only if the appropriate conditions are met. While drawing on the large body of literature on generic facilitation strategies, this paper emphasises the role of the facilitator in providing the appropriate conditions for the strategies to succeed.

The better management of group dynamics is increasingly being recognised as crucial for the success of inquiry-based curricula such as PBL. Improving the training of facilitators is therefore becoming an issue of paramount importance. The findings presented above provide a practical framework for the identification of common problems in student behaviour that can confront the facilitator, as well as a range of strategies that have been found by experienced facilitators to be useful in managing these issues. Understanding these issues and providing adequate training for facilitators will be extremely important in ensuring the effectiveness of these educational programmes. Clearly these are complex issues, but their resolution may well be important in sustaining the viability of inquiry-based curricula.

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# Attitudes to gender equality issues in British and German academia

*by*

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*This paper explores a range of perceived similarities and differences between male and female academics in the context of contemporary European Union "gender mainstreaming" policy. It concentrates upon the higher education systems of Germany and the United Kingdom, and is based upon questionnaire responses. A large majority of respondents believe that more needs to be done to remedy inequalities arising from maternity leave and child rearing, and that their universities are still gendered organisations with too few women at the top. Many females regard themselves as less strategic than males in managing their careers, and believe that they need to behave the same as men to succeed. They think that men have historically dominated in their subject area and still do so. Relatively small percentages of men endorse these opinions in relation to women, and their responses are often positive in their perception of female academics. It is almost universally agreed that women are doing a good professional job, and very few employees (either male or female) experience gross forms of bullying and harassment at work. A certain convergence between the genders in some respects may indicate the erosion of binary gender hierarchies in the current policy environment.*

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# Attitudes quant à l'égalité homme-femme dans les universités allemandes et britanniques

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*Cet article aborde un éventail de similarités et de différences que l'on perçoit entre les enseignants hommes et femmes dans le contexte de la politique de la "mixité des genres" au sein de l'Union Européenne. Il se concentre sur les systèmes d'enseignement supérieur allemand et britannique, et se base sur les réponses à un questionnaire. Une grande majorité de personnes ayant répondu au questionnaire estiment qu'il y a encore beaucoup à faire pour remédier aux inégalités survenant lors de la grossesse et des congés de maternité, et que leurs universités demeurent des structures au sein desquelles trop peu de femmes occupent des postes à responsabilité. De nombreuses femmes se considèrent comme étant moins actives que les hommes dans la gestion stratégique de leur carrière, et estiment qu'elles doivent se comporter de la même façon que les hommes afin de réussir. Elles pensent qu'elles ont toujours été, au cours de l'histoire et encore maintenant, dominées par les hommes dans leur domaine d'activité. Néanmoins, un relativement faible pourcentage d'hommes partagent cet opinion au regard des femmes, et leurs réponses sont souvent positives dans la perception qu'ils ont des universitaires féminines. Il est presque unanimement reconnu que les femmes sont de bonnes professionnelles, et que très peu d'employés – qu'ils soient hommes ou femmes – sont victimes de harcèlement au travail. Il existe une certaine convergence entre les genres sous certains aspects, pouvant révéler l'érosion de hiérarchies de genres dans le paysage politique actuel.*

> "[M]ost people who experience unfair disadvantage do so because they are female, or black, or disabled, or gay, or old (and any combination of those)," University and College Union.[1]

## Background to the study and research questions

Gender equality is a major policy objective for the European Union (EU). The Bologna Declaration of 1999 set out to achieve a European Higher Education Area with mutually recognised, harmonised qualifications based on a two- (later three-) cycle structure of bachelor-master (doctorate). It was progressively supplemented by other communiqués to include a social dimension which was hailed as an integral part of the Bologna Process at Prague in 2001, Bergen in 2005 and more recently London in 2007. The social dimension aims at **equity** and **equality of opportunity**, including **gender in higher education**, making these a goal for universities throughout Europe.[2] The concept of gender mainstreaming has been adopted by the EU, and a commonly accepted definition by the United Nations Economic and Social Council states that:

> Mainstreaming a gender perspective is the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality.[3]

The Fourth Action Programme (1996-2000) on Equal Opportunities for Women and Men featured mainstreaming as its most important element and called for it to be incorporated into all community policies and activities.[4] It is clear from the above that equality for **men** is also a policy target, and that equal, fair structures must apply to both genders: the UN Population Fund declares gender equality a **human right** and sets its face against reverse discrimination. The Council of Europe's Steering Committee for Equality between Women and Men has also devoted specific attention to the question of men and gender equality. It emphasises that gender equality cannot be achieved by women alone, but by women and men working together.[5]

The present study is based upon questionnaires involving 387 respondents and analyses gender perceptions among academics in British and German universities.[6] These represent two seminal models of higher education with two very different career structures. In the United Kingdom, there is a "ladder" of tenured lectureships before professorships, whereas in Germany, the rank of professor is the main career grade, and one normally has to complete a post-doctoral thesis (*Habilitation*) in a fixed-term position and then "jump" to one's first full professorship. See Krais (2002) and Pritchard (2007) for a detailed description of gender-related factors in UK and German academe; elsewhere, Pritchard (1998) gives an analysis of the organisation of research in the two countries under discussion.

It is not always possible to match UK and German data year by year because one country sometimes lags behind the other in the publication of its statistics, but certain gender inequalities can be documented. In the United Kingdom, 17.5% of the professoriate were female in 2006/2007, rising to 18.7% in 2007/2008; 38.6% of senior lecturers and researchers were women, as were 47.9% of lecturers.[7] In Germany, the highest professorial salary grade is "C4" (for new employees the highest level is "W3" with revised terms and conditions of service that are less favourable than C4): in 2006 the proportion of women in these top categories was 11.0%, having doubled between 1993 and 2004.[8] Although this sounds impressive, the change is less than 0.5% per annum, starting from a low base. Pay in Germany is normally individually negotiated for professors, making it impossible to calculate aggregates. In the United Kingdom, the gap between average pay for female academics compared with their male colleagues is narrowing, albeit slowly. There has been a small decline in inequality from 15.6% (1999-2000) to just over 14% (2003-6).[9] The largest gaps (18.5%) are at the research intensive universities (the "Russell Group"), and the smallest at specialist colleges (5.6%).[10] Positional inequality and pay are two of the most salient forms of gender inequality, and in this paper, we shall try to find answers to the following questions:

- How do participants define professional "success"?
- What are the perceived similarities and differences between male and female academics in the workplace?
- What is the perceived effect of university equality legislation designed to remedy unfair practices in the workplace?
- To what extent are women academics believed to be making a valuable contribution in their workplace?

## Methodology

The research questionnaires consisted of 100 statements with four response options ranging through strongly agree (SA) – agree – disagree – strongly disagree (SD). A neutral option was consciously avoided. The instrument was piloted on samples in the United Kingdom and Germany similar to the target sample for the main study, using people in a variety of academic positions from fixed-term staff to deans and heads of departments. The types of institutions chosen were full universities in Germany and pre-1992 universities in the United Kingdom. The *Fachhochschulen* (universities of applied sciences) were excluded on the grounds that they are a different type of institution. Four subject areas were covered: science, technology, engineering and mathematics ("STEM") subjects; economics and business studies; humanities; and social sciences. These subject groupings emanate from the research of Becher (1989) on academic groupings and associated sub-cultures which has become an influential model, recently re-edited and re-issued (Becher and Trowler, 2001). Certain items were refined, supplemented or eliminated on the basis of the pilot study. The questionnaire data from the main study were entered into SPSS, a data management tool. Frequencies and percentages were calculated, and the results were broken down by country and by gender. At first analyses were performed on a four point scale; later the results were dichotomised into the combined categories of S/A and S/D. Chi square tests (2x2) were then calculated on valid cases only to determine statistically significant differences. The findings are presented in the tables below, occasionally supplemented by additional untabulated (UT) items reported in prose form.

## Profile of the respondents

There were 387 respondents of whom ten people did not give their gender. Of the remaining 377, 38% were male and 62% female; 49% were from the United Kingdom and 51% from Germany, so the sample was well balanced between the two countries. The higher female response may indicate that the issues were of more interest to women than to men. Table 1 gives details of the respondents' employment status or career grade. Twelve per cent of the total sample had special posts such as vice-chancellor, pro-vice-chancellor, dean, head of a school or institute; 59% had tenure, whereas 41% did not. Of the 41% who did not have tenure, about three-quarters were on fixed term contracts of three years or less. Approximately half of those who did have tenure had been employed for up to 10 years, and about three-quarters for up to 20 years, so many of the tenured staff had had long experience of academe and some were very senior in position. When asked to give details of their personal and family lives, 47% stated that they had children, although 7% of the sample chose not to supply such

Table 1. **Employment Contract or Career Grade**

| | Number of respondents | Per cent |
|---|---|---|
| Contract researcher | 70 | 20 |
| Doctoral student | 52 | 15 |
| Postdoctoral researcher | 45 | 13 |
| Lecturer | 111 | 31 |
| Senior lecturer | 20 | 6 |
| Professor | 50 | 14 |
| Other | 9 | 3 |
| Total | 357 | 100 |
| Non response | 30 | |
| | 387 | |

information; 84% had a life partner, either within or outside marriage, and of those who were not "partnered", only 14% claimed never to have had one even in the past. Therefore, most had experience of close personal relationships whether legally formalised or not.

## Presentation of the findings

### *How do participants define professional "success"?*

In Table 2 below, the S/A responses are given first and are followed by the S/D responses. As it shows, most people (United Kingdom and Germany, Male [M] and Female [F]) believed that becoming a full professor was the ultimate criterion of success – **much** more important than becoming a head of school or dean. A large minority of women believed that men are more strategic than females in managing their careers (M 12%: F 48% S/A), and endorsed the option that they themselves "need to behave **the same** as men in order to succeed" although by comparison not so many men thought that this was true (M 14%: F 37% S/A).

Almost twice as many women as men (M 27%: F 50% S/D) rejected the statement: "I find it rewarding to do administration", and the German respondents disliked it even more than the British (UK 34% and Germany 42% S/D). Asked whether they would prefer to leave academe altogether and do a different job, over 79% strongly disagreed; but 14% of the German sample compared with 7% of the British sample **did** indicate that they would like to embark upon another career. Both countries and both genders believed that they had good prospects of success in the future, but somewhat more of the UK respondents were confident that they had "already achieved significant career goals" (UK 39%: Germany 35% S/A UT). About two-thirds of the sample disagreed that females adopt submissive attitudes towards authority but 27% (UT) of the

Table 2. **Success and Career Management***

| Positive response tendencies | UK S/A | Germany S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| Becoming a full professor is the ultimate indicator of professional success.<br>64% | 113<br>30% | 129<br>34% | .24<br>NSD | 84<br>23% | 152<br>41% | .15<br>NSD |
| Men are more strategic than women in managing their careers.<br>60% | 101<br>27% | 122<br>33% | .13<br>NSD | 44<br>12% | 174<br>48% | .00 |
| Women need to behave the same as men in order to succeed.<br>51% | 85<br>23% | 103<br>28% | .21<br>NSD | 50<br>14% | 135<br>37% | .00 |
| **Negative response tendencies** | **UK S/D** | **Germany S/D** | **X** | **Male** | **Female** | **X** |
| I find it rewarding to do administration.<br>77% | 132<br>35% | 157<br>42% | .04 | 100<br>27% | 186<br>50% | .01 |
| I would prefer to leave higher education and embark upon another career.<br>79% | 155<br>41% | 141<br>38% | .00 | 122<br>33% | 168<br>46% | .02 |
| Females tend to adopt submissive attitudes towards those higher up.<br>66% | 126<br>34% | 116<br>32% | .10<br>NSD | 111<br>31% | 128<br>35% | .00 |

*Items are listed under S/A if the percentages for the sample total 50% or more; otherwise they are listed under S/D.
NSD signifies No Significant Difference in the probability figure given below the $X^2$. The totals for S/A or S/D are given after each statement for ease of reference.
United Kingdom + Germany add up to 100% as do male (M) and female (F) percentages.

women themselves compared with only 7% of male colleagues did **accept** the statement. This may indicate female conformity to an expected response or indeed a gendered behavioural set.

### *What are the similarities and differences between male and female academics in the workplace?*

If quite a lot of women think that they need to behave **in the same way** as men in order to succeed, it may be worth exploring perceived similarities and differences between the genders in the workplace.

#### *Caring and emotionality*

It is often argued that women are marginalised by funnelling them into pastoral care roles (Toller *et al.*, 2004), therefore the respondents were asked whether male academics can perform the caring role as well as female academics. There was more support for this in the United Kingdom than in Germany (Table 3: UK 43%: Germany 35% S/A); significantly more women

than men expressed agreement that men could "care" too, so clearly females do **not** believe that their male colleagues are necessarily lacking in emotional intelligence. Asked furthermore whether women are just as emotionally robust as men, again the British tended to agree more than the German respondents (there is no significant difference between the genders here). The majority of the sample did **not** believe that "women care more about good personal relations within the department" (in fact 59% of the whole sample disagreed).

Table 3. **Caring and emotionality**

| Positive response tendencies | UK S/A | Germany S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| Male academics can perform the caring role as well as men. 78% | 163 43% | 131 35% | .00 | 122 33% | 157 45% | .01 |
| Women academics are emotionally just as robust as men. 77% | 158 42% | 134 35% | .00 | 115 31% | 170 46% | .26 NSD |
| **Negative response tendency** | **UK S/D** | **Germany S/D** | $X^2$ | **Male** | **Female** | $X^2$ |
| Women care more about good personal relations within the department. 59% | 108 29% | 110 30% | .46 NSD | 106 29% | 110 30% | .00 |

### *Professional values*

As the first two items in Table 4 indicate, the German sample, both male and female, attached much greater importance to interpersonal capabilities than the British. And somewhat surprisingly, far fewer people in Germany accepted that "In research, ... men and women should be judged by a single standard" (UK 37%: Germany 17%). Over one-third of German respondents (Germany 35% UT) and a similar percentage of females (F 35% UT) actually **disagreed** with this statement. The proportions in the sample as a whole accepting that "women academics have embraced male values in academe" were almost equally balanced (S/A 49%: S/D 51%) although women did accept this statement significantly more readily than men (M 15%: F 34% UT). A small majority across both countries rejected the notion that women and men have distinctive ways of approaching research or teaching.

Table 4. **Professional values**

| Positive response tendencies | UK S/A | Germany S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| The ability to communicate is as important as high-grade research success in my subject.<br>74% | 121<br>32% | 158<br>42% | .00 | 103<br>28% | 170<br>46% | .90<br>NSD |
| The ability to get along with human beings is vital for academic success in my area.<br>64% | 108<br>28% | 139<br>36% | .01 | 97<br>26% | 144<br>38% | .26<br>NSD |
| In research, I firmly believe that men and women should be judged by a single standard.<br>54% | 140<br>37% | 65<br>17% | .00 | 103<br>28% | 95<br>26% | .00 |
| **Negative response tendencies** | **UK S/D** | **Germany S/D** | **$X^2$** | **Male** | **Female** | **$X^2$** |
| Women academics have embraced male values in my discipline.<br>51% | 92<br>25% | 996<br>26% | .40<br>NSD | 78<br>22% | 105<br>29% | .02 |
| Women and men have distinctive ways of approaching teaching.<br>53% | 105<br>28% | 92<br>25% | .38<br>NSD | 97<br>26% | 99<br>27% | .00 |
| Women and men have distinctive ways of approaching research.<br>61% | 117<br>31% | 110<br>30% | .14<br>NSD | 107<br>29% | 118<br>32% | .00 |

### *Teaching and research*

The following items show no significant difference either in terms of cross-country comparison or gender comparison:

- "My students and the quality of my teaching are more important to me than promotion." (UK/Germany and M/F: 57% agreed with this statement.)
- "Teaching is my highest professional priority." (UK/Germany and M/F: 74% disagreed.)
- "Research is my highest professional priority." (UK/Germany and M/F: 54% disagreed.)
- "Research and teaching are equally important to me." (UK/Germany and M/F: 59% agreed.)
- "There are more rewards for research than for teaching." (UK/Germany and M/F: 88% agreed.)

Most people rejected either teaching or research as their highest priority although they did attach considerable importance to their teaching. They wanted a balance between the two functions, and were very clear where the rewards lie (in research).[11]

As Table 5 shows, there was much stronger agreement in Germany that men have dominated their disciplinary field historically, and continue to do so

right up to the present day. The majority did not think that there were satisfactory structures in place to support junior women scholars, but nor did they agree either that research investment tends to privilege men: 66% of the overall sample rejected this proposition. Research was perceived predominantly as a competitive business: 57% disagreed that it was co-operative (over a third of the women were of this opinion); lastly, the females believed to a greater extent than the males that "competition in research reinforces the dominance of men" (M 13%: F 33% UT).

Table 5. **Gender influences in teaching and research**

| Positive response tendencies | UK S/A | Germany S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| Historically men have tended to dominate in my subject.<br>89% | 145<br>39% | 188<br>50% | .00 | 123<br>33% | 209<br>56% | .17<br>NSD |
| Even now, the leaders in my subject still tend to be male.<br>80% | 126<br>33% | 179<br>47% | .00 | 106<br>28% | 194<br>52% | .03 |
| **Negative response tendencies** | **UK S/D** | **Germany S/D** | **$X^2$** | **Male** | **Female** | **$X^2$** |
| There are structures in place to support women in junior positions in my subject area.<br>58% | 110<br>30% | 105<br>28% | .11<br>NSD | 62<br>17% | 150<br>41% | .00 |
| The way we pursue our discipline is predominantly co-operative rather than competitive.<br>57% | 102<br>27% | 107<br>30% | .59<br>NSD | 76<br>21% | 128<br>36% | .82<br>NSD |
| Research investment tends to privilege men.<br>66% | 112<br>31% | 126<br>35% | .50<br>NSD | 112<br>32% | 122<br>34% | .00 |

### *Networking, academic sponsorship and role modelling*

As Table 6 shows, there was strong agreement overall (86%) that in order to get a promotion, it is essential to have a good network, but significantly more German respondents agreed that this was so (UK 39%: Germany 47%); and a larger minority of them considered that it is more difficult for women than for men to develop a good network (UK 20%: Germany 27% S/A); 36% (UT) of the females **strongly agreed** with this statement. A majority (62%) agreed that senior male academics are good at encouraging women staff but many (54%) also perceived some of them as quite sexist: it seems that positive and negative perceptions co-exist in the workplace. It was the UK participants who were more conscious of positive role models in their subject areas for younger female academics (UK 38%: Germany 33%); more women than men felt that this was the case. Perceptions of communication included the delicate matter of social interaction. The respondents were asked whether in mixed

Table 6. **Networking, socialising and role modelling**

| Positive response tendencies | UK S/A | Germany S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| It is essential to have a good network in order to get promotion.<br>86% | 147<br>39% | 180<br>47% | .00 | 107<br>29% | 212<br>57% | .00 |
| Senior male academics in my department are often good at encouraging junior women staff.<br>62% | 107<br>29% | 122<br>33% | .39<br>NSD | 97<br>27% | 128<br>35% | .00 |
| Some senior men in my subject are quite sexist in their outlook.<br>54% | 106<br>28% | 98<br>26% | .14<br>NSD | 66<br>18% | 136<br>36% | .02 |
| There are senior women in my subject who are good role models for the younger women academics coming up.<br>71% | 141<br>38% | 121<br>33% | .00 | 121<br>33% | 140<br>38% | .00 |
| When men and women are having an academic discussion, the men tend to communicate with *the most important person present* whether man or woman.<br>68% | 113<br>30% | 143<br>38% | .00 | 80<br>22% | 170<br>46% | .00 |
| **Negative response tendency** | **UK S/D** | **Germany S/D** | $X^2$ | **Male** | **Female** | $X^2$ |
| It is more difficult for women than for men to develop a good network.<br>54% | 107<br>28% | 96<br>26% | .05 | 105<br>28% | 96<br>26% | .00 |

discussions the men tended to communicate predominantly with each other (thereby excluding the women). Two-thirds disagreed, especially in the United Kingdom (UK 33%: Germany 28% UT), but in a related statement, the German sample agreed to a significantly greater extent than the British that the men tend to communicate with the **most important person present** when having a discussion (UK 30%: Germany 38%). This person could be male or female and focusing on "important people" is certainly indicative of being influenced by "power" *per se*.

In order to forge professional relationships, it is necessary to invest time in them. A greater percentage of British than of German academics (Table 7) claimed that they socialised regularly with their academic colleagues, but they were also more likely to claim that they worked long hours in the evening and at weekends. Yet, surprisingly, the UK participants were more satisfied than German participants with their work-life balance. Both countries and both genders are convinced that there is no possibility of changing this balance at present. The respondents may be resigned to the perceived demands of the job, and in the United Kingdom to the centralised audit culture.

Table 7. **Work-life balance**

| Positive response tendencies | UK S/A | German S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| I socialise regularly with my academic colleagues.<br>51% | 109<br>28% | 88<br>23% | .00 | 77<br>20% | 119<br>31% | .75<br>NSD |
| I regularly work long hours in the evening and at weekends.<br>66% | 142<br>37% | 111<br>29% | .00 | 104<br>28% | 143<br>38% | .04 |
| I am broadly satisfied with my work-life balance.<br>58% | 117<br>31% | 102<br>27% | .03 | 91<br>25% | 123<br>33% | .05 |
| I see no way of changing my work-life balance at present.<br>74% | 140<br>37% | 147<br>37% | .81<br>NSD | 107<br>29% | 173<br>46% | .90<br>NSD |

### *Lifestyle patterns: partners and family life*

Almost three-quarters of the sample, especially in the United Kingdom, felt that their friends and family were more important to them than their own professional success (Table 8). The German sample, however, felt that it is especially difficult for women with children to get to the top (UK 35%: Germany 44%). Opinions were almost equally split (51% S/A: 49% S/D) on the statement that "The roots of gender equality lie in values conveyed within the family" and there was NSD between countries and genders.

Table 8. **Partnerships and family life**

| Positive response tendencies | UK S/A | Germany S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| My friends and family are more important to me than professional success.<br>74% | 144<br>39% | 130<br>35% | .00 | 104<br>29% | 165<br>45% | .45<br>NSD |
| It is especially difficult for women academics with children to get to the top.<br>79% | 132<br>35% | 167<br>44% | .00 | 95<br>26% | 196<br>53% | .00 |
| The roots of gender inequality lie in values conveyed within the family.<br>51% | 89<br>25% | 92<br>26% | .28<br>NSD | 60<br>17% | 118<br>34% | .26<br>NSD |

### *What is the perceived effect of university equality legislation designed to remedy unfair practices in the workplace?*

It is easier to change working practices than to change the nature of the family, so the participants were questioned on the effect of legislation and of university policies designed to alleviate the problems of gender inequality.

### *Bullying and harassment*

A sequence of questionnaire items was developed about bullying and harassment; in order to give the wording authenticity and currency, it was derived from an analysis of specific university equality policies. As seen in Table 9, participants in both countries are not normally subjected to offensive behaviour of a gross kind, although 43% do feel that they have on occasion been unfairly treated by a superordinate. Women in particular tend to **disagree** that they have been the object of malicious rumours, deprived of information, managed aggressively, and above all, most of them claim that they have **not** been subject to sexual coercion by superordinates: only 3% of the female sample claimed that this was the case, and only 0.3% of the men (UT).

Table 9. **Rejection of certain bullying and harassment charges**

| Negative response tendencies | UK S/D | Germany S/D | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| On some occasions I have been treated unfairly by a superordinate.<br>57% | 97<br>25% | 120<br>32% | .06<br>NSD | 95<br>26% | 117<br>31% | .00 |
| I have been blocked from training opportunities.<br>95% | 175<br>46% | 184<br>49% | .81<br>NSD | 139<br>37% | 215<br>58% | .21<br>NSD |
| Malicious rumours have been spread about me.<br>89% | 162<br>43% | 173<br>46% | .87<br>NSD | 131<br>36% | 198<br>53% | .03 |
| Unpleasant jokes have been made about me.<br>93% | 167<br>44% | 185<br>49% | .06<br>NSD | 136<br>37% | 210<br>56% | .14<br>NSD |
| I am sometimes deprived of information that is necessary for me to do my job.<br>71% | 132<br>35% | 135<br>36% | .82<br>NSD | 112<br>30% | 151<br>41% | .01 |
| My line manager is sometimes aggressive and unsympathetic.<br>88% | 156<br>43% | 164<br>45% | .75<br>NSD | 125<br>35% | 190<br>53% | .02 |
| I have been subjected to unjustified criticism of my work.<br>85% | 154<br>41% | 165<br>44% | .77<br>NSD | 124<br>34% | 189<br>51% | .17<br>NSD |
| I have on occasion been subjected to coercion for sexual favours by someone who could influence my career.<br>97% | 178<br>47% | 187<br>50% | 1.0<br>NSD | 141<br>38% | 218<br>59% | .03 |

Table 10, also presented according to **disagreement**, but this time with significant levels of difference across countries, shows that there was especially strong **German** rejection of the proposition that they had been subjected to unfair employment practices, and strong overall rejection by the sample as a whole. Women quite strongly rejected the notion that they were being isolated from social activities.

Table 10. **Unfair practices in the workplace**

| Negative response tendencies | UK S/D | Germany S/D | X2 | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| I have on occasion been isolated at work from social activities or conversation.<br>76% | 124<br>33% | 164<br>43% | .00 | 121<br>33% | 161<br>43% | .00 |
| I have been given disproportionately more work than my colleagues.<br>75% | 114<br>30% | 169<br>45% | .00 | 111<br>30% | 168<br>45% | .32<br>NSD |
| Unrealistic objectives have been set for me.<br>84% | 141<br>37% | 178<br>47% | .00 | 127<br>34% | 187<br>50% | .07<br>NSD |
| Things that I have said are sometimes twisted out of context.<br>77% | 124<br>33% | 165<br>44% | .00 | 109<br>30% | 175<br>47% | 1.0<br>NSD |
| I have been unfairly denied promotion.<br>88% | 148<br>40% | 180<br>48% | .00 | 122<br>33% | 202<br>55% | .62<br>NSD |

Therefore, in response to a whole battery of questions designed to probe injustice in the workplace, the participants overwhelmingly claimed to be reasonably treated and neither bullied nor harassed. Let us now look at university practices.

### *University legislation*

As presented in Table 11, there was cross-country agreement (73%) that the respondents' universities are still gendered organisations, and that the higher education system sustains inequality (although the majority was tiny at 51%). The German respondents agreed more strongly than the British that there are too few women at the top of the system (UK 34%: Germany 44%); females too agreed significantly more often than males with this statement together with the proposition that their universities were still "gendered organisations". A majority (59%) thought that the EU was an important influence in promoting gender equality: in fact, significantly more of the British than German sample endorsed this item (UK 35%: Germany 24%) which is surprising as Germany is generally more pro-EU than the United Kingdom. Only 52% thought that universities were better in terms of gender equality than comparable organisations; three-quarters of the sample admitted that a large number of people within their HEIs accepted the need to achieve gender equality. However, 61% thought that "Equal treatment of both sexes is insufficient to ensure gender equality", and women assented to this statement significantly more often than men (M 18%: F 43%). In untabulated data, almost 78% thought that "The prospects of women academics will improve within the next 5-10 years" and a large majority (80%) thought that policies that are good for women are also good for promoting excellence within higher education as a whole.

Table 11. **Perceptions of institutional gender equity**

| Positive response tendencies | UK S/A | Germany S/A | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| My university is still a gendered organisation.<br>73% | 118<br>32% | 148<br>41% | .07<br>NSD | 77<br>22% | 184<br>51% | .00 |
| The higher education system sustains inequality.<br>51% | 93<br>26% | 92<br>25% | .24<br>NSD | 40<br>11% | 143<br>40% | .00 |
| Our university has too few women at the top of the system.<br>78% | 128<br>34% | 164<br>44% | .00 | 87<br>23% | 201<br>55% | .00 |
| The European Union is an important influence in promoting gender equality.<br>59% | 119<br>35% | 81<br>24% | .00 | 65<br>20% | 131<br>39% | .06<br>NSD |
| Universities are better in terms of gender equality than other comparable organisations.<br>52% | 103<br>28% | 88<br>24% | .00 | 84<br>23% | 104<br>29% | .00 |
| Equal treatment of both sexes is insufficient to ensure gender equality.<br>61% | 95<br>26% | 126<br>35% | .01 | 63<br>18% | 152<br>43% | .00 |
| Most people in our institution accept the need to achieve gender equality.<br>74% | 147<br>40% | 125<br>34% | .00 | 117<br>32% | 152<br>42% | .00 |

Equality legislation is therefore broadly accepted and is believed to be operating in a beneficial way. However, the rights of men and minorities also need to be considered. Is the legislation beginning to operate in a way that makes the men feel disadvantaged? Table 12 below explores these issues. The overwhelming majority (80%) felt that the legal framework was **not** operating to the disadvantage of men, but females endorsed this option significantly more frequently than males (M 25%: F 55%, p = .00); they also rejected the notion that women were exploiting the law in an unfair way, or that men were now disadvantaged within the system. The data are classified into positive and negative response tendencies presented according to the majority response, but an inspection of untabulated data also proves interesting at this point: twice as many German respondents agreed with the statement that men are now disadvantaged, although the percentages are tiny (UK 3%: Germany 6% UT); moreover 12% (UT) of German **men** strongly agreed that **male** academics are the new disadvantaged people, and 24% (UT) that equality legislation was beginning to work to their disadvantage. This German finding may be due to the procedure of according preference to women in appointment panels where there appear to be male and female candidates of equal merit; 79%, especially in Germany, thought that equality in relation to parenting has still not been achieved. When asked if prejudice against gay people would disappear in the near future the German sample was particularly pessimistic, and a small majority (52% UT) would like to

see equality legislation broadened to include a greater number of inequality dimensions. Two-thirds of the sample disagreed that "Men and women have achieved full equality in my department"; 60% claimed that gender issues had been "mainstreamed" in their HEIs, although somewhat revealingly one-third (UT) had to admit that they were "not exactly sure what 'mainstreamed' means". More women than men claimed to know about this.

Table 12. **Effects of equality legislation**

| Negative response tendencies | UK S/D | German S/D | $X^2$ | Male | Female | $X^2$ |
|---|---|---|---|---|---|---|
| Equality legislation is now beginning to work to the disadvantage of men.<br>80% | 150<br>42% | 138<br>38% | .00 | 89<br>25% | 195<br>55% | .00 |
| Women exploit equality legislation in a manner that is unfair to men.<br>90% | 154<br>42% | 173<br>48% | .72<br>NSD | 110<br>31% | 212<br>59% | .00 |
| *Men* are now the new disadvantaged people within the academic system.<br>91% | 170<br>45% | 173<br>46% | .05 | 115<br>31% | 222<br>60% | .00 |
| Everything that it is possible to do about the inequalities arising from maternity leave and child bearing has now been done.<br>79% | 128<br>35% | 160<br>44% | .01 | 94<br>26% | 188<br>53% | .01 |
| Any prejudice against gays or lesbians will have disappeared within the next 5-10 years.<br>80% | 119<br>33% | 169<br>47% | .00 | 102<br>29% | 184<br>51% | .07<br>NSD |
| I am not sure exactly what "mainstreamed" means.<br>67% | 109<br>30% | 133<br>37% | .11<br>NSD | 90<br>25% | 150<br>42% | .48<br>NSD |
| **Positive response tendency** | **UK S/A** | **German S/A** | **$X^2$** | **Male** | **Female** | **$X^2$** |
| Gender issues have been "mainstreamed" within our institution.<br>59% | 92<br>28% | 103<br>31% | .36<br>NSD | 81<br>25% | 110<br>34% | .04 |

### *To what extent are women academics making a valuable contribution in their workplace?*

Are women themselves making a sufficient effort in the workplace? Are all the activities of government, administrators and legislators to promote equity worthwhile? Zimmer *et al*. (2007, p. 81) quote some negative evidence in this respect, therefore in the present study, the respondents were asked about their perceptions of women's capacity for effective work. The overwhelming majority (95%) agreed that women make a worthwhile contribution in their subject areas, and high percentages of the total sample **rejected** statements that they "do not really pull their weight within the department" (97% S/D), that they "tend to put less effort into their work than men" (98% S/D) or that

they "take sick leave or stress-related leave too easily" (96% S/D). The majority (88% S/D) also refuted the statement that "Whatever inequality there is within higher education comes from women's own lack of single mindedness". It is clear that both sexes strongly respect the role of women in professional academic life. Although there are still global perceptions that the task of achieving gender equality has not yet been achieved, these co-exist with a respect for the professional contribution of women, and a consciousness that things are changing in relation to gender inequity.

## Discussion

The academic contribution of women is highly valued and not disputed. It seems that most of the formal aspects of discrimination against women have been overcome, and that there is as yet little reverse discrimination against men. Some men in Germany suffer from a real fear that they have reduced chances in the face of affirming policies towards women. Despite findings of a UK survey to the contrary,[12] in which 17% of respondents had personally experienced some form of harassment at work in the previous twelve months, there is little or no personal experience of bullying, harassment or sexual coercion in the present sample, and employment practices are seen as broadly fair. Yet most thought that their universities were still gendered organisations, and that there were too few women at the top. They felt that there was unfinished business, and that work remained to be done particularly with regard to the inequalities arising from child bearing and rearing. Most people disagreed that **equal** treatment of both sexes was sufficient to ensure gender justice. Sen (1999) makes a distinction between process freedoms (*e.g.* participation in discussions) and outcomes (*e.g.* the content and level of education achieved). The ongoing processes have achieved much, but the outcomes are still developing; and the two countries under scrutiny have much to learn from each other.

The notion that gender issues had been "mainstreamed" was fairly widely accepted, yet one-third of the respondents were vague about what this term actually meant, perhaps because it is usually implemented as a top-down strategy by management (Bauer and Gruber, 2008, p. 119). The policy aim of ensuring that all practices and behaviours are considered from the perspective of gender takes time to embed within the institutions; Paseka (2008, p. 149) emphasises that gender mainstreaming needs pre-established support structures and that resistance to it is sometimes protracted though it may be subtle in nature. Historically, the weight of authority and merit has been attributed to men, and it is a long-term project to achieve a more equal balance of esteem. Moreover, the core value of "equality" may simply not have the same resonance as "freedom". Baer (2008) writes: "Liberty is framed as a social good, related to rational autonomy, while equality is construed as the

site of the social limiting personal freedom." She herself would subsume quality under the banner of equality, and disparages the concept of "able-ism" in the sciences. She even believes in "diverse options of knowledge in a world beyond one truth" (ibid, p. 25). This may raise hackles, but in the present study, about one-third of the British respondents agreed that men and women should be judged by a single standard in research, and one-third of the Germans **disagreed**: so could or should women and men be judged by **different** standards in research? And what explains the cross-country difference in response to this item?

It is possible that the existence of the Research Assessment Exercise (RAE) in the United Kingdom has a homogenising effect upon standards by postulating nation-wide, gender-blind criteria of judgement. The effect of this may be to essentialise the individual scholar in a way that is incompatible with Baer's "diverse options of knowledge". It is true that an equality impact analysis was performed for the RAE; however, German policy aims not just at checking for unfair bias but at actually promoting gender equality achievements ("equal treatment is not enough…"). In the prestigious "Excellence Initiative" (a competition for funding support designed to stimulate universities to high achievement, see Krull, 2008, p. 249), gender is an important factor: a university that is unable to demonstrate that it is taking women seriously and capitalising on their talent will not be successful in this competition. Between 2006 and 2011 the German Research Council (*Deutsche Forschungsgemeinschaft* – DFG) will receive a total of EUR 1.9 billion in additional funding for this initiative.[13] In 2008, the DFG launched "Research-Oriented Gender Standards" according to which every institution should set its own goals for increasing the proportion of women at specific qualification levels, and actively strive to distribute its resources having regard to gender quality issues (DFG, 2008). The Standards "mean that universities and non-university research institutions must commit themselves to promoting equal rights for women and men in all areas of work in the coming years. Aspects of this include the official stipulation of the support of women as a central task for university and institutional managements, improving the compatibility of career and family life in research and science and increasing the proportion of women at professorial level and in other scientific management positions" (ibid, p. 1). The HEIs will be autonomous in the way they implement the Gender Standards, but this must be done by 2013, and will be used as a criterion in the award of funds by the DFG.

In some ways the women in our sample were self-deprecating. They regarded themselves as less strategic than males in managing their careers and more submissive to authority; they thought that they themselves needed to behave **in the same way** as men to succeed, and that men had historically and contemporaneously dominated in their subject. Vogel and Hinz (2003)

invoke Bourdieu's statement that gender hierarchy can only have power if it is internalised by "dominated" women (1977). Only small percentages of men in the present sample endorsed critical views in relation to women, so their response syndrome is positive, not mean-spirited, in its perception of female academics. Fewer men than women rated females as less strategic in career management, and they did not think that women needed to behave like men in order to succeed. Far fewer men claimed that males are now subject-dominant, which must mean that they think females are making an important contribution. Hardly anyone disputed the statement that women are doing a good job.

In their turn, the females too had a reasonably generous perception of male colleagues. Many were convinced that male academics are capable of doing justice to a caring role, and that women have no monopoly of concern about good relations within the department. A larger percentage of female than of male respondents agreed that the senior men were good about encouraging the more junior female scholars (despite some residual sexism). Men and women colleagues clearly have mutually positive perceptions of each other in several respects, and indeed there is a certain convergence in their accepted norms and values. This could indicate "infiltration of feminine emotions into a public space" (Knights and Surman, 2008) and a displacement of masculinities or a negotiation of gender identities, but in any case it points towards a softening of binary gender attitudes. Davies (2006) has stipulated that in order to guard the borders of our own identity, a process of category maintenance is necessary, sustained through what she calls "border work" in order to maintain the binary categories. Arnot and Mac an Ghaill (2006, p. 9) claim that a shift has taken place away from challenging structural inequalities between relatively fixed gender categories towards deconstructing the categories themselves. Gender is no longer seen as a simple natural fact, but in terms of how men and women articulate their understanding of being subjects in a world of flux. Yet there is one respect in which boundaries **are** being maintained: over 80% of the present sample believe that prejudice against gays and lesbians will **not** have disappeared in the next 5-10 years: there was much greater agreement about this in Germany than in the United Kingdom. If Haywood and Mac an Ghaill (2006, p. 54) are correct in their assertion that heterosexuality is structured through misogyny and homophobia, then it is important to broaden the basis of equality legislation beyond binary categories. This has now been done, but feelings have not yet caught up with the letter of the law.

In the United Kingdom, there was no legal requirement to combat discrimination against lesbians, gay men and bisexuals at work until 2003, so their needs were often overlooked when it came to implementing workplace equality policies. In 2007, the existing Commissions for **disability, race and**

**sex** were dissolved, and became subsumed under the Commission for Equality and Human Rights (1 October 2007).[14] On 24 April 2009 an Equality Bill was introduced in the House of Commons.[15] Its stated aim is to "harmonise discrimination law, and to strengthen the law to support progress on equality". It replaces the three existing duties with a single duty covering the protected characteristics of **race, sex, pregnancy and maternity, gender reassignment, disability, age, sexual orientation and religion or belief**. In a new provision, Clause 72 seeks to promote greater transparency and dialogue about pay in the workplace by outlawing pay secrecy clauses and protecting people who wish to discuss their pay with colleagues. Terms of employment that restrict people from disclosing or talking about their pay will be unenforceable. In Germany, a general anti-discrimination law came into force on 18 August 2006, and covers **race, sex, religion and worldview, disability, age and sexual identity**.[16] Within HEIs, there is an increasing consciousness that equality issues need to be broadened beyond gender (as 27% of German respondents **agreed** in the present study), and the terminology of Women's Representative is gradually being replaced by Equality Officer or similar. A UK-type Clause 72 in Germany would enable university salary comparisons to be made, and data about them to become publicly available. This would give a further fillip to the gender equality movement.

We have seen that the women in the study feel themselves to be relatively mediocre career strategists, and can feel excluded in conversations when men are fixated upon the most powerful interlocutors. Women have less access to professional networks, and cannot easily find role models; Allmendinger *et al.* (2000) highlight the importance of mentoring, and point out that few female academics have the continuous natural informal mentoring relationships enjoyed by males. The European Commission's Sixth Framework Programme aims to promote the advancement of women's careers by developing a European network of mentoring programmes (Füger *et al.*, 2008).[17] "TANDEMplusIDEA" is the first mentoring programme between leading technical universities in Europe, and is funded by the Sixth Framework. It involves co-operation between Imperial College London, the ETH Zürich, the Technical University of Delft and RWTH, the University of Aachen (Leicht-Scholten, 2008). It works best in association with training and networking, and is particularly appreciated by academics in the Social Sciences.

The women in our study attached even greater importance than did the men to professional networking as a powerful strategy to improve their work prospects. It has been defined by Forret and Dougherty (2004, p. 420) as "individuals' attempts to develop and maintain relationships with others who have the potential to assist them in their work or careers". These authors see networking as a way for women to progress, and as a proactive behaviour

that helps to build social capital with an eye to career benefits. In an empirical study of management and professional people, they aimed to discover whether the relationships between networking behaviours and career success differed for men and women. In general terms, they found that networking did more good to men than to women. However, one important result was that increasing internal visibility was significantly related to career success for women (but not for men). They deduced that women should strive consciously to enhance their visibility in organisations, and that the increased awareness of their efforts may contribute to their career success. They consider it vital for women to build contacts with important people who can influence their career outcomes, and feel that females ought not to be too inhibited about asking their contacts for career assistance. It would be useful to have some further research on the utility of networking for both men and women, specifically in academe, because it helps to ensure inclusion and to embed academics fully in their communities. Otherwise their integration may be precarious.

Just as inequality between male and female academics derives from many causes, so there needs to be recourse to many remedies.[18] In the present study, almost 80% of the respondents disagreed that "Everything that it is possible to do about the inequalities arising from maternity leave and child bearing has now been done." Van Anders (2004), in an empirical study entitled "Why the Academic Pipeline Leaks", concludes that the lack of quality childcare, unequal/uncertain access to paid parental leave and geographical "hypermobility" are the major institutional barriers specific to women; but are **remediable**. The problem is being tackled from many different angles. Nationally and internationally, there is well developed awareness of what structures and programmes are most effective. These efforts are bearing fruit, and must be maintained.

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# Characteristics of effective and sustainable teaching development programmes for quality teaching in higher education

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*There is a growing need for teacher development centres to help instructors of higher education become better teachers. This paper describes a multi-year study designed to explore how these centres support effective and sustainable teaching development with the aim of providing a quality teaching and learning experience. Key interview findings revealed four practices that are characteristic of effective teaching centres: knowing how to be strategic; using a multilayered approach; working with existing pressures, tensions and challenges; and knowing how to get the work done. The results of this study also offer insights on how to assess the strengths and challenges of teaching centres, and suggest that leaders of these centres consider their programme outcomes carefully in order to build a centre that meets the needs of both participants and policy makers. Finally, the findings assist in framing programmes to facilitate a quality teaching and learning experience.*

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# Caractéristiques des programmes de développement de l'enseignement efficaces et durables destinés à améliorer la qualité de l'enseignement secondaire

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*Les centres de développement de l'enseignement sont de plus en plus soucieux d'aider les professeurs d'université à améliorer la qualité de leur enseignement. Ce document décrit une étude pluriannuelle qui a été menée afin d'examiner la manière dont ces centres soutiennent le développement d'un enseignement efficace et durable en vue d'apporter une expérience d'enseignement et d'apprentissage de qualité. Les principales conclusions de l'étude ont révélé quatre pratiques caractéristiques des centres d'enseignement efficaces : agir de manière stratégique ; utiliser une approche multicouches ; travailler avec les pressions, les tensions et des défis existants et savoir quelle méthode de travail appliquer. Les résultats de cette étude donnent également un aperçu sur la manière d'évaluer les points forts et les défis rencontrés par les centres d'enseignement, et suggèrent que les responsables de ces centres analysent avec attention les aboutissants de leurs programmes afin de créer un centre qui répond à la fois aux besoins des participants et des décideurs politiques. Enfin, les conclusions de l'étude permettent de définir les priorités des programmes destinés à promouvoir une expérience d'enseignement et d'apprentissage de qualité.*

## Introduction

There is a growing need for teacher development centres to help instructors of higher education become better teachers. Efforts have been made to enhance the quality of the student learning experience and therefore the quality of teaching, there are constantly new technologies, and the evolution of higher education institutions is driven by, and driving, changing expectations and institutional rankings. The need for effective and sustainable teaching centres is also linked to a desire for innovations in teaching and learning methods. And yet the role of teaching centres in supporting quality teaching remains ambiguous.

To some degree, teacher development centres which impart effective teaching practices have a responsibility to ensure that instructors move beyond traditional classroom approaches (*e.g.* lectures). Innovative teaching strategies can include not only diverse teaching methods, a mix of face-to-face and online approaches, but also inspiring campus-wide responsiveness revolving around effective teaching practices throughout institutions of higher education. However, moving beyond time-honoured teaching initiatives is not without tensions and challenges. As the pressure for institutions of higher education to provide quality teaching increases, so too does the need to gain a better understanding of how teacher development centres can successfully support their instructors as they adopt effective approaches in their own teaching practices.

The overarching objective of this study was to gain a broader understanding of how teaching centres can move beyond the challenges and tensions to support quality teaching and learning experiences. To achieve this objective, the study was designed to explore how institutions of higher education develop, establish and maintain effective and sustainable teaching development services.

## Quality teaching: theories and approaches

A review of the literature reveals there are two generally accepted theoretical views and approaches considered as essential to facilitating a quality teaching and learning experience: *i)* knowing how students learn (developmental learning theories); and *ii)* approaches to teaching and learning.

### *Developmental learning theories*

Understanding how students learn (learning theories and the cognitive sciences) has been the subject of research by psychologists over the whole of the twentieth century (Biggs, 1999). Researchers such as Jean Piaget and Erik Erikson have presented seminal theories of cognitive development that span the cradle to the grave. Within the higher education sector, perhaps Perry (1970; 1981) and Baxter Magolda (1992; 1999) have been most influential.

The Perry scheme emerged from exhaustive qualitative analyses of the ways in which students described their experiences and transformations over their college years (Perry, 1970; 1981). Perry and colleagues were looking for, and expecting to find, personality differences. What they found instead of stable individual differences in personality was a consistent educational journey. Perry characterised this as "an intellectual Pilgrim's Progress" (1974, p. 3). He found that students progress from a world of absolutes and truth into a world of contexts and commitments in which one must take stands and make identity choices to find meaning in one's life.

Perry's research revealed the cognitive and affective perspectives at the heart of tertiary education, involving a movement toward more complex forms of thought about the world, one's discipline/area of study and one's self. His scheme emerged from the notion that the most powerful learning, the learning most institutions of higher education really want to see students achieve as a result of their experiences with classes/curricula, involves significant qualitative changes in the way learners approach their learning and their subject matter.

Nine self-explanatory positions comprise Perry's scheme: dualism (positions 1-2), multiplicity (positions 3-4), contextual relativism (position 5, and beyond), commitment with relativism (positions 6-9). Taken as a whole, Perry's scheme reflects two core constructs: *i)* confronting and coping with diversity and uncertainty with respect to new learning, and *ii)* the attendant evolution of constructing knowledge about learning and one's self. As depicted in the nine qualitatively distinct positions (and transitions between them) of the scheme, learners navigate through three increasingly complex encounters with diversity in the form of multiples: multiple opinions (positions 1-3), multiple contexts/perspectives (positions 4-6) and multiple commitments (positions 7-9).

Similar in many ways to Perry's scheme, Baxter Magolda's Model of Epistemological Reflection (1992; 2000) was developed from a five-year longitudinal study of students at Miami University. Using student interviews, 101 students described their experiences with knowledge development from their first year in college through one year after graduation. There are four stages in Baxter Magolda's Model for Epistemological Reflection: absolute knowing, transitional knowing, independent knowing and contextual knowing.

Predictably, these theories have clear implications with respect to understanding quality teaching practices. As students move through these positions (Perry) and/or stages (Baxter Magolda), their knowledge construction evolves in predictable ways. Typically, knowledge is seen as increasingly conjectural and uncertain, open to (and requiring) interpretation. This, in turn, triggers corresponding shifts in the students' views about the role of the instructor – moving from an authority which dispenses truths on the topic, to an authority as a resource with specific expertise to share. Likewise, the students move to view their own role as a passive receptor of facts to being actively engaged in defining arguments and creating new knowledge.

### *Approaches to teaching and learning*

Another direction researchers have taken in an effort to better understand a quality teaching and learning experience is through research that attempts to understand students' approaches to learning. Early research in this area revealed that students approach their learning in two ways (Biggs, 1999). One approach students take to their learning is referred to as the "surface" approach. With this approach, students tend to memorise disjointed facts. The other approach students take to their learning is referred to as the "deep" approach. In this approach, students attempt to construct knowledge. Research on students' approaches to learning (*e.g.* Prosser *et al.*, 2003; Meyer and Vermunt, 2000; Hazel *et al.*, 2002) shows that there are correlations between students' approaches to learning and quality learning outcomes. Specifically, students who reported taking surface approaches to their learning perceived the teaching to be "poorer, the goals and standards to be less clear, the workload to be too high and the assessment to be testing reproduction, were shown to have poorer quality understanding of key concepts and to be performing less well on tests of achievement" (Biggs, 1999, p. 38). Alternatively, students who reported adopting deeper approaches perceived the teaching to be "better, the goals and standards to be clearer, the workload to be not too high and the assessment to be testing understanding, were shown to have higher quality understanding of key concepts and to be performing better on tests of achievement" *(ibid)*.

Further research in this area has also revealed a relation between the way students approach their learning and the way teachers approach their teaching. Student-focused changes revolving around teaching are associated with deep approaches to learning, and teacher-focused information transfer approaches to teaching are associated with surface approaches to learning (Trigwell *et al.*, 1998). Specifically, students reporting a lower quality learning experience also reported that their teachers' approaches to teaching were dissonant and unrelated or incoherently related to perceptions of the teaching and learning context. Interestingly, these findings also revealed this is less so

for senior teachers. Alternatively, students reporting higher quality learning experiences reported approaches to teaching that were not dissonant and coherently related to perceptions of the teaching and context, and consistently, for more senior teachers. This research suggests, then, that quality learning experiences and outcomes can be expected when there is consistency in approaches to teaching and coherent relations between approaches to teaching and perceptions of the teaching context, at least for the more senior teachers.

In turn, this has implications for how to support instructors in moving toward consonant approaches to their teaching and positive perceptions of their teaching context. On this note, Prosser *et al.* (2003) argue that instructors need assistance in understanding that conceptual changes and development do not occur through the accumulation of more information, but by helping students to understand information in the context of their own real world experiences. Similarly, Biggs (1999) asserts that effective teaching is not a matter of applying general principles of teaching according to rules or best practices. Nor is it a matter of simply learning about teaching competencies. It is, instead, having instructors work through their own solutions. This, according to Biggs, requires reflection. The essence of practitioner reflection is about how instructors can encourage students to "engage in learning-related activities that help them attain the particular objectives set for the unit or course, such as theorising, generating new ideas, reflecting, applying, problem-solving, memorising and so on" (Biggs, 1999, p. 9). Within this notion of quality teaching, it has additionally been found that instructors need to adapt personality and disciplinary cultures to the specific teaching context (Becher and Trowler, 2001; Donald, 2002; Schulman, 1987). Comparable to Schön (1983; 1987), Biggs maintains that effective instructors continually reflect in action and on action about how they can improve their teaching strategies.

### *Inferences drawn*

Both areas of research lead to the conclusion that a quality teaching and learning experience requires a learning-focused approach, in which "the point of departure for teaching is the students' experience of learning – not the teachers' experience of teaching" (Prosser *et al.,* 2003, p. 47). Unfortunately, while institutions of higher education have concerns revolving around the quality of their teaching and learning, their efforts have not always been as systematic as they could be or as visible and accountable as they should be (Martens and Prosser, 1998).

Many, indeed most, institutions of higher education have created teaching centres to support instructors in providing a quality teaching and learning experience – and to do so in a visible and accountable manner. Less clear is whether these centres are effective at achieving these goals.

### *Methodology*

Marshall and Rossman (2006) suggest that qualitative methods are well suited for exploratory or descriptive research that emphasises the importance of context and setting as well as a deeper understanding of the participants' experiences with the phenomena. Accordingly, qualitative inquiry methods were used for this interpretive research project which involved selecting and interviewing participants and then analysing data.

All 27 participants were in leadership positions, worked in a centralised university teaching development centre and were experienced in the field of teaching in higher education. They were selected by first employing targeted sampling to "select unique cases that are especially informative" (Neuman, 2000, p. 198) and then by snowball sampling as the initial participants suggested others that might be willing to discuss further. Data for this study were gathered from higher education institutions in Britain, Scotland, Canada, the United States, Norway, Sweden, Finland and Australia.

Each centre's website was reviewed, prior to the interview, for descriptions and objectives of programmes and initiatives, mission statements and philosophies, outlines of the work and services provided, strategy documents and plans, annual reports (if available), teaching resources provided for their faculty, research and project initiatives undertaken, the calendar of events, and listings of staff and working committees. Gaining this familiarity ensured that valuable high-level interview time was not spent in explanations of each programme, but rather enabled the participants to engage in more in-depth and focused discussion.

The semi-structured interviews focused on the following main topics:

- Teaching development programme and key initiatives.
- How the centre is positioned strategically within the university and how it does its work.
- Challenges encountered.
- Success stories and key learnings.

### *Data analysis*

Merriam (2001, p. 178) describes data analysis as the process of constructing knowledge: "consolidating, reducing, and interpreting what people have said and what the researcher has seen and read". With a goal of constructing categories or themes that capture recurring patterns in the data, Merriam's recommendations guided analysis. Using the constant comparative method of data analysis, categories were created that reflect the purpose of the research, were exhaustive, mutually exclusive, sensitising and conceptually congruent.

Category construction began with the first set of notes (Merriam, 2001). After working through the notes, "like" comments and views were grouped together and a running list of these groups created. The next set of data was treated in a similar way, and the lists of notes and groupings were compared to the first set. The result was a set of categories derived from the data. Separate thematic analyses were conducted, followed by debriefing meetings to avoid researcher privileging, maintain trustworthiness of the data and detect potential biases or inconsistent conclusions.

## *Findings*

The findings revealed practices that are characteristic of effective teacher development centres. These findings have been clustered into the following four themes.

### *Theme 1: Know how to be strategic*

This theme captures the importance of being able to operationalise policy designed to support quality teaching through interactions with different stakeholders, and in particular, the deanery (deans and heads of departments). Being strategic in how one regards teaching development, and designs and implements the initiatives, appears to be critical. While high-level support to ensure that quality teaching is enforced is obviously important, it does come with its challenges and uncertainties. Participants also talked about their strategies to increase the power of a teaching development centre. Operating as a centralised unit within the university not only provides a bird's-eye view, it is also a more powerful position. Finally, this theme indicates the impact and inter-relatedness of other policy and processes on the work and positioning of a teaching development centre. On this theme, one participant shared the following reflection:

> The university understands the connection between students, teaching and research. You can't produce research if you don't provide good instruction and support students. So leadership doesn't question the value of the unit to the university's goals and strategic plan. No, this is not an issue here.

Participants noted with consistency that there is a need for teaching centres to:

- Operationalise policy.
- Recognise the different stakeholders.
- Understand the need to work with the "all-powerful middle level" (department heads/chairs and deans).
- Create a presence and links within the schools/faculties.

- Ensure there is high-level support and involvement.
- Recognise that teaching centres typically have limited power but also recognise the power that a centralised unit has.
- Develop tactics/strategies when support from the top is not reliable.
- Understand the impact and work within the inter-relatedness of other university policy areas.
- Work toward making changes in policy leading to increased attention and focus on a quality teaching and learning experience.

### *Theme 2: Use a multilayered approach*

All institutions had a variety of offerings, considered an essential approach to teaching development. Moreover, teaching development initiatives often seemed to be intertwined with each other and with other initiatives and practices outside the centre. This type of enfolding and multi-layering creates a web of linkages between different faculty development initiatives, ostensibly creating a more seamless and comprehensive programme. Data specific to different approaches is shared: workshops and events, projects, awards and recognition, post-graduate certificate programmes, working with individuals, supporting informal learning and online presence. A closer reading of the other thematic data also offers insights on the ins and outs of each of these approaches as well as other faculty development approaches that can be woven into such a mosaic. On this theme, one participant shared the following:

> The other day we had a seminar and gave out the top pedagogical prize and the vice rector gave an opening speech and she said we shouldn't 'just' be one of the top research universities … we should also be one of the top teaching universities as well.

Within this theme, there was consistency with respect to the need to:

- Provide a cluster of offerings (*e.g.* credentialed programmes, workshops, events, special projects).
- Have a multi-layered approach (inter and intra/to initiatives outside and within the centre).
- Provide awards and recognition.
- Work strategically with individuals.
- Support informal learning.
- Have a communication plan that disseminates the value of the centre's activities.
- Have a strong online presence.

### *Theme 3: Getting the work done*

Interview participants spoke a great deal about how they and their centres go about their work within the university. The importance of relationship building, working in a consultative and collegial manner, and being both subtle and subversive emerged from the data. Incorporating the centre's learning and teaching philosophy into all aspects of the work was highlighted. Special note was made of building relationships with the departments and faculties – the important middle level. Participants talked about the importance of positioning the centre within the university, constantly attending to credibility, reputation and presence, and being able to engage in conversations in a manner that academics relate to by drawing on the research. They also shared insights on the resources required to do their work. Within this theme, the following quote captures the essence of this topic:

> … for the consultation work a lot of that relies on experience and knowing the different departments and the study programmes. We spend a lot of time putting ourselves into the position and the context these people have.

Within this theme, participants identified the need to:

- Develop a specific and recognisable style for the centre.
- Be clear on the definition of quality teaching, tied to the institution's Academic Plan.
- Cultivate relationship with departments, schools and colleges within the university.
- Develop a presence institution-wide, via like-minded colleagues.
- Ensure all staff have credibility; this is critical.
- Provide programmes and activities that are research/evidence-based.
- Provide evidence-based resources.
- Find entry points throughout the institution.
- Provide activities and programmes face-to-face, and online.

### *Theme 4: Pressures*

This theme describes some of the pressures, tensions and challenges faced by teacher development centres and staff. This list is wide-ranging and covers technology, organisational culture and policy. Participants talked about finding the right mix in attempts to resolve various tensions. They also discussed the ongoing dance of a teaching development centre as it manages the constant influx of internally and externally generated forces giving rise to an array of challenges as well as opportunities. Illustrative of this theme, one participant noted:

> But with sustainability – that's part of the challenge getting the right people working here… but it's difficult to get people with experience and that's what we need here… people who have credibility in their field and in teaching.

Within this theme, participants shared the need to:

- Use technology in ways that create openings; find the right mix.
- Address the challenges (*vs.* avoiding the challenges).
- Do "the centre dance".
- Provide leadership that creates an organisational culture that values teaching.
- Find out why people participate in the activities and programmes.
- Ensure the centre is involved in institutional policy.

## Discussion

Findings from this study indicate that effective teacher development activities offered by teaching centres that support deep learning approaches are research-based, credible, strategic and integrated. Successful teaching programmes for instructors in institutions of higher education have moved beyond participation rates and satisfaction ratings in order to collect evaluation indicators that demonstrate the breadth and depth of change in teaching and learning.

The results of this study also support the findings of the OECD-IMHE Phase I investigation on quality teaching (Hénard, 2009, pp. 8-10). In particular, the findings of this study are consistent with the following outcomes of the IMHE study:

- The concept of "quality teaching" is complex and open to a range of definitions and interpretations.
- The vast majority of the initiatives taken by institutions to enhance teaching quality is empirical and addresses their particular needs at a given time.
- Institutions should be aware that it is a university's local environment that primarily shapes the extent of its commitment to the quality of teaching. Its continued development needs the long-term support of top university leadership.
- Encouraging bottom-up initiatives from the faculty members, setting them in a propitious learning and teaching environment, providing effective support and stimulating reflection on the role of teaching in the learning process all contribute to the quality of teaching.
- Neither the size nor the specificity of an institution poses a major obstacle to the development of institutional policies as long as the institution's

management is manifestly involved and ongoing, and sufficient funding and adequate facilities are earmarked for the quality of teaching on a long-term basis.

- The participation of faculty deanery is also vital insofar as deans and department heads/chairs, being at the interface between an institution's decision-making bodies and teachers on the job, encourage the cross-fertilisation of strategic approaches, build and support campus-wide and nurture innovation in everyday practice in the classroom.

## Educational significance

This international study brought to light four key practices that are characteristic of effective teaching centres. As importantly, the findings support the outcomes of the OECD-IMHE Phase I investigation on quality teaching. They are also valuable with respect to assessing the strengths and challenges of teaching centres that offer teaching programmes, while helping to meet the growing need for support services for quality teaching. In particular, the findings of this study suggest that leaders of teacher development centres must consider their programme outcomes carefully in order to build a centre that meets the needs of both participants and policy makers, in addition to offering insights about how to assess the strengths and challenges of their centres.

In closing, the findings from this study have implications for teaching centres arising from the increased expectations of students, the anticipated influx of new professors and the influence of change in campuses around the world. Leaders of teaching centres need to account for the resources allocated to support programming through reporting practices that demonstrate the ability to enhance the student learning experience through the quality of teaching, while also contributing to the overall goals of the institution.

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# "Employability" through curriculum innovation and skills development: a Portuguese case study

*by*

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*Over 50% of Portuguese graduates are out of work for more than six months after leaving university, against the OECD average of 42%. This suggests that universities need to do more to improve graduates' chances on the labour market and, in many ways, the Bologna reform provided European Union universities with an opportunity to tackle this issue. This paper describes how the Bologna process led to reform at the Catholic University of Portugal's Faculty of Economics and Management, starting in 2005. Undergraduate studies were reduced from four to three years and strategies were implemented to improve graduates' employability. The primary aspect of the reform was a competency-based approach to curricula development, along with the creation of three new courses dealing specifically with transferable skills: critical thinking, systemic thinking and communication and teamwork.*

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# « L'employabilité » à travers l'innovation dans le curriculum et les compétences : une étude de cas au Portugal

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*Plus de 50 % des diplômés portugais restent sans emploi pendant plus de six mois après avoir quitté l'université, alors que la moyenne de l'OCDE est de 42 %. Ceci suggère que les universités doivent faire plus pour améliorer les chances des diplômés sur le marché du travail, et la réforme de Bologne a, par différents moyens, donné aux universités de l'union européenne l'occasion de résoudre cette question. Cet article décrit comment le processus de Bologne a guidé une réforme au sein de la Faculté d'Économie et de Gestion de l'Université Catholique du Portugal, et ce depuis 2005. Les études de premier cycle ont été réduites de quatre à trois ans et des stratégies ont été mises en œuvre pour améliorer l'employabilité des diplômés. L'aspect fondamental de la réforme a été une approche du développement des programmes axée sur les compétences, en plus de la création de trois nouveaux cours portant spécifiquement sur des compétences transférables : la pensée critique, la pensée systémique, ainsi que la communication et le travail d'équipe.*

## Introduction

The notion of "employability" conveys the idea that individuals are now increasingly responsible for their own welfare and that of society, therefore they must acquire specific knowledge and skills, especially the knowledge and skills that employers need (DfEE, 2000). It also relates to a broad global context developed around the idea that knowledge is the new basis for wealth (Thurow, 2000, p. 13). In the words of Hillage and Pollard (1998, p. 1), "employability is about having the capability to gain initial employment, maintain employment and obtain new employment if required". In other words, it is individuals – rather than the labour market – who determine their own employability. European Union (EU) employability policies have been "challenged by those who question the extent to which labour market inclusion and social inclusion can be equated" (McQuaid and Lindsay, 2005, p. 204). This is because policies centred exclusively on the supply side of the labour market fail to acknowledge the fact that, to a large extent, it is the labour market that determines one's chances of finding employment. If there are few jobs available, employability will be low, even if applicants are highly educated and have the required skills. Moreover, the emphasis on one's employability obscures employers' recruitment practices. These can at times be discriminating, in particular those in relation to female applicants (Gaskell, 1987; 1992).

Political and corporate agendas suggest that universities are primarily responsible for developing graduates' employability. Thus, if individuals are ultimately responsible for their employability, universities are accountable for ensuring the conditions for students to develop their employability. The Bologna process was one of the main drivers of curriculum restructuring in the EU. As a result, the European Credit Transfer and Accumulation System (ECTS) and convertibility have broadened the limits of potential labour markets for EU graduates. Moreover, restructuring has fostered the guiding notion of employability along with the necessity to establish adequate contexts for transferable skills development.

This paper briefly discusses the notion of employability and some of its implications, namely the functionalist approach which resonates in the discourses of both politicians and corporate leaders. The second part of the paper describes how the Bologna reform process was implemented at the Catholic University of Portugal's Faculty of Economics and Management (FEG), where curriculum innovation led to programme reform, as described below.

## Employability and the skills agenda

Employability, "the new buzzword in labour market policy circles" (Peck and Theodore, 2000), is still a notion under scrutiny. Peck and Theodore see in it a "kind of supply side fundamentalism". In their view, it is an ideological notion that overlooks the demand side of labour markets by concentrating exclusively on the supply side. However, "There is little doubt that structural shifts have created mismatches between labour supply and demand" (McQuaid and Lindsay, 2005, p. 203). Thus, employability fails to address a number of labour market contingent factors affecting one's employability, and firm size is a case in point. The actual number of jobs available is another paramount factor. In addition, the current emphasis on the supply side of the labour market also disregards employers' recruitment and selection practices. These can overtly be a source of social exclusion and discrimination, therefore affecting ones' employability. Moreover, the discourse of employability calls for university curricular reform in order that labour market needs may be met.

The notion of employability implicates that of skills, and since the 1990s many European governments placed the skills agenda at the core of labour market policy. Thus, "the skills agenda continues to be promoted in policy at national and institutional level" (Holmes, 2001). The political emphasis on employability also appears to be a way to build a bridge between business and education (Taylor, 1998). Close relationships between universities and the corporate world may then be seen as a way to avoid the mismatch of skills developed. Nevertheless, "many academics are suspicious of closer links to business" (Harvey, 2000, p. 5). It seems that in OECD countries co-operation between business and schools has developed because universities have lost touch with the realities of labour markets, and therefore fail to respond to firms' needs in terms of knowledge and skills that are required at entry-level positions (OECD, 1992). This functionalist approach seems to have prevailed and, in the words of Morrow and Torres (1995, p. 60), universities, and indeed the school system at large, are regarded as "a mechanism of selection and assignment of persons' pre-existing statuses". Hence, universities became responsible for creating the conditions for graduate employment. It appears that the political and corporate skills agendas fail to acknowledge that "the employability of graduates should not be seen as the primary focus of higher education" (Harvey, 2000, p. 4).

### *Field structure*

In Portugal, only 0.4% of firms operating in the country are large companies while 97.3% of them are small or micro-sized. This means that 2.3% of firms are medium-sized (IAPMEI, 2008, pp. 1-5). Together, micro, small and medium-sized companies provide 75.2% of all jobs and generate 56.4% of the country's wealth. This particular structure of the corporate field challenges general and abstract

assumptions regarding employability. Small and micro-sized firms are unlikely to employ university graduates. Although the Portuguese corporate discourse on employability follows the general trend, it fails to address the specificities of the economic structure and to clarify which needs universities are failing to meet. Therefore, if graduates' employability is to be improved, change would perhaps need to be made on the demand side of the labour market. However, it has been persistently argued that graduate unemployment is concentrated in the fields of studies that have lost touch with the reality of the labour market, such as philosophy, history or sociology. So, if employability enhances one's transferable skills rather than scientific and technical ones, then the first degree should be of little relevance and graduates should be hired according to their knowledge, skills and competences, not their degree subjects. This leads to further remarks on the demand side of labour markets and, more specifically, employers' recruitment practices.

### *Recruitment and selection*

The emphasis on employability masks the fact that corporate recruitment and selection practices tend to be discriminatory. The emphasis on transferable skills enhances applicants' social origins and families' early cultural investments. In other words, well-read and well-spoken applicants are more likely to be successful, and one's skills and one's personal qualities are a source of innovation and productivity for the economy (Brown *et al*., 2004). If this is true, employers may be actively contributing to the social reproduction of advantages that are perceived as individual abilities. In addition, if graduates' attributes are so crucial, they should weigh "more in the recruitment processes than the graduates' degree subject" (Harvey (2000, p. 7). Employers in the United Kingdom are keen recruiters of graduates from apparently ill-suited subjects: "For example, many large accountancy and management consultancy firms seek history, classic, social science or physics graduates rather than accountants" (Harvey, 2000, p. 7). In Portugal, however, the degree subject is of paramount importance in recruitment (Guimarães, 2006). Hence, if the "transferable-skill discourse" were genuine, subject-specific knowledge would not be a primary criterion in recruitment. There are, of course, four main exceptions: health-related fields, engineering, law and architecture. In such cases, the degree subjects are directly related to the professional activity. However, management and economics are two fields of study favoured by employers, which suggests that management and economics graduates benefit from the contradictions in employers' discourse and practice. In other words, while employers emphasize the virtues of transferable skills, they actually prefer to recruit according to the candidate's degree subject. For this reason, graduates with a management or economics background are more likely to find an entry-level position than graduates from other fields.

### *Educational contingencies*

It was the prevalence of supply-side discourse and policies that led Portuguese universities to focus on graduates' employability. The start up of career services in the mid-1990s was one way of tackling the issue. However, it was the Bologna reforms that steered deep institutional and curricular change, while the EU Qualifications Framework – as well as its national adaptations – determined the desirable outcomes of education. Therefore, while discussing the meaning and relevance of notions at academic levels, educational systems have had to adjust to meet the National Qualifications Framework (NQF) outcomes. At FEG, in Porto, this was a long and somewhat complex process. Being a faculty with relatively sound connections in the corporate world, it was understood that employers should be considered as stakeholders. The main challenge was to find ways to maximise their contributions. Mobilising the academic staff was yet another challenge as restructuring the curricula led to some anxieties regarding the possibility of academic standards being downgraded and of eventual job losses. There was a risk of increasing "instrumental learning" (Harvey, 2000, p. 7), given the temptation for teachers to ensure that students display apparently desirable skills and downgrade academic and scientific standards. The process of curriculum innovation at FEG was fuelled by consideration of all these issues. Finally, however, there was consensus around the idea that the faculty needed to be careful not to concentrate its activity exclusively on labour market outcomes. A competency-based approach was developed and implemented using a five-stage process, starting in 2005. The outcomes started to be assessed in April 2010.

## Curriculum innovation at FEG

### *Stage one: skills valued on the labour market*

In the wake of Bologna, the Lisbon treaty's definition of the strategic goal for higher education was "to make the EU the most dynamic and competitive knowledge-based economy of the world, capable of sustaining economic growth with more and better jobs and greater social cohesion …" (European Council, 2000). This goal reinforced Bologna's guidelines towards co-operation among higher education institutions (HEIs) as well as curricular reform.

FEG is a small faculty (at the time of writing it had 798 enrolled students and 74 teachers) within the Catholic University of Portugal (UCP), along with several other faculties: law, psychology and education, theology and arts. Nowadays it offers dynamic and flexible academic programmes which closely reflect the university's ties with the business community. The faculty has evolved thanks to a far-reaching and ongoing reform process, based on a major reassessment of the curriculum. To help guide this process – which commenced in 2005 – in-depth interviews of employers and alumni took place, the aim being

to understand which subjects were relevant at entry level. This led to a revision of the choice of courses on offer at undergraduate and postgraduate levels, and some of the course subjects were discontinued. In line with the Bologna reforms, curricular restructuring included reducing the length of undergraduate studies from four to three years. Employers appreciated the scientific results of graduates' university training but criticised their systematic lack of transferable skills. Their views were in tune with the survey conducted by Cabral-Cardoso *et al*. (2006), which concluded that both graduates and employers considered that HEIs needed to boost transferable skills development.

The interviewees identified a number of skills valued on the market: teamwork, communication skills, critical thinking, client orientation and integrity were the most commonly cited (Oliveira *et al*., forthcoming). Interviewed alumni revealed that there was insufficient distinction between the work undertaken by management and economics graduates. They were therefore in favour of placing transferable skills development at the heart of curriculum innovation and development. This meant that innovative teaching and assessing practices were required, especially in relation to developing and assessing students' transferable skills, although other contexts are equally relevant for developing students' skills, namely extracurricular activities and work experiences (Oliveira *et al*., 2010). Data from the interviews was then used to steer the following stage.

### *Stage two: curricular deconstruction*

The second stage of innovation was marked by curricular deconstruction, and faculty discussions of the curriculum focused on learning outcomes. A number of objectives guided the discussions. First, the subjects offered by the faculty should be diverse so as to provide students with a cosmopolitan and broad vision of the world. Second, it was necessary to identify a common set of subjects to be offered simultaneously to students of economics and management. Third, the objective of curriculum deconstruction was not simply to reduce the number of subjects, but rather to clarify the aims and learning outcomes of all the subjects on offer. Lastly, it was decided to minimise undergraduate specialisation and defer this to postgraduate level. One output of this stage was an outline of the new undergraduate curriculum structure comprising 180 ECTS (European Credit Transfer System), which allows a student to progress on to the next stage.

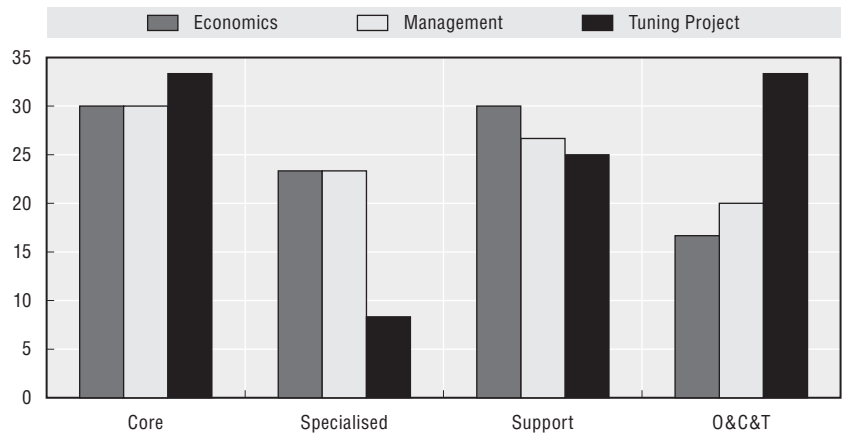
### *Stage three: curriculum redesign*

Redesigning the curriculum meant structuring the different subjects across six semesters. Students were advised to take ten subjects per year. The curriculum was modularised around six ECTS subjects and, drawing on the Tuning Project (2002, p. 48), it was redesigned around four categories of subjects:

core; specialised; support; and organisation, communication and transferable skills (O&C&T). During their three years of studies, students were required to take nine core subjects, which "make up the backbone of the respective science" (*e.g.* microeconomics, macroeconomics, finance, etc.) (Tuning, 2002, p. 48). They were required to take seven specialised subjects, allowing for in-depth study in subject areas (*e.g.* accountancy, international economics), eight to nine support or complementary subjects (*e.g.* statistics, mathematics, ethics, sociology) and three mandatory courses focusing on transferable skills. These transferable skills (critical thinking, communication, teamwork, systemic thinking and entrepreneurship) are specific subjects, *i.e.* where reality confronts theory. To ensure the development of transferable skills, a three-year implementation programme was developed and is detailed below. After redesigning the curriculum the faculty was able to measure the transferable skills.

Figure 1 compares FEG's curricular structure against the Tuning Project. The proportion of specific courses is higher at FEG than in the Tuning Project (about 25% at FEG compared to under 10% in the Tuning Project). Conversely, transferable skills (organising and communicating, plus other transferable skills) are better represented in the Tuning Project than at FEG (around 20% at FEG compared to over 30% in the Tuning Project). However, at FEG transferable skills are also included in regular courses such as ethics, sociology, micro and macroeconomics, which require and develop communication skills, critical thinking and sometimes teamwork. As a result, transferable skills are likely to be graphically underrepresented.

Figure 1. **FEG's curricular structure compared to the Tuning Project**




*Source:* Oliveira, E. (2009), "Employability, Transferable Key Competencies and Curricular Innovation", presentation based on "Employability and Entrepreneurship: Tuning University and Enterprises", paper presented at the Thematic Cluster Meeting "Erasmus' Contribution to the Bologna Priority Action Lines", Brussels.

### *Stage four: mapping transferable skills*

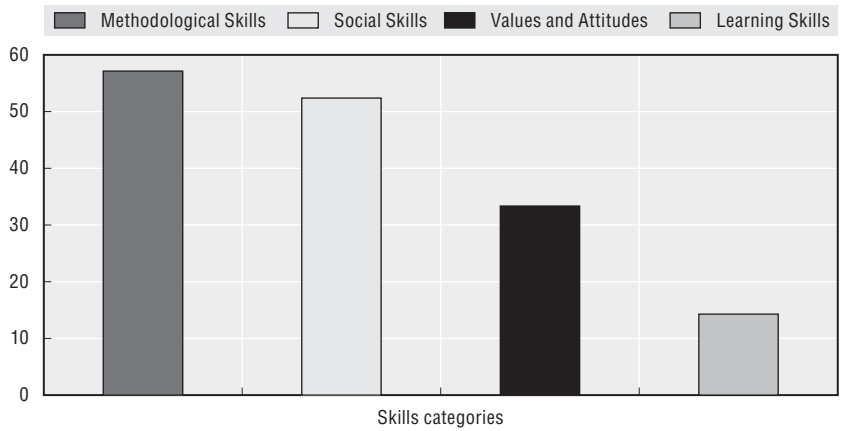
This stage consisted of "identifying the transferable skills involved in each subject, group of subjects and academic years" (FEG/DCO/Equipa PIC, 2008, p. 6). Initially, the Starfish model (Evans, 2001) was used to map the transferable skills. It is based on a set of different but interrelated skills enabling successful moves in one's career. Skills are grouped around five clusters of personal skills and competences, namely: methodological, social, values and attitudes, learning, and technical skills. These are "interlinked and interdependent of human actions" (CEDEFOP, n.d., cit. in Evans, 2001, p. 3). Mapping the transferable skills entailed two complementary actions: *i)* the identification of transferable skills within subjects, and *ii)* self-assessment of pedagogical practices. Teachers were invited to explore opportunities for skills development and encouraged to explore innovative pedagogy. Initially they were given a template with a description of the mapped transferable skills to serve as a benchmark with which to assess students. They were then encouraged to develop their own assessment tools, based on the template. Meanwhile, students were given the list of transferable skills included in the syllabus (Figure 1); this list details the specific set of skills under assessment in each subject. This is an ongoing process, as each year teachers must reassess their pedagogical practices and adjust the set of skills that they intend to develop and assess.

Figure 2 shows the proportion of subjects that allow for the assessment and development of transferable skills. A little over 50% of them assess and develop methodological skills (personal and work organisation, problem solving, creativity, systemic thinking); 50% of subjects assess and develop social skills (written communication, oral communication, interpersonal relationship, team work); while only 30% of them assess and develop values and attitudes (responsibility, persistence, integrity and ethics, motivation to learn). Just over 10% of them assess and develop learning skills (adaptation to change, quality and excellence, knowledge and information management, learning skills) These figures suggest that more efforts are needed to promote the development of students' life-long learning skills.

Figure 3 illustrates teachers' assessment practices at FEG throughout the three-year implementation process. Tests are predominant, followed by individual assignments, group assignments and participation. The importance of class presentations is secondary, and these are concentrated on second- and third-year subjects. Further efforts, therefore, are required to ensure adequate and diverse contexts for developing life-long learning skills.

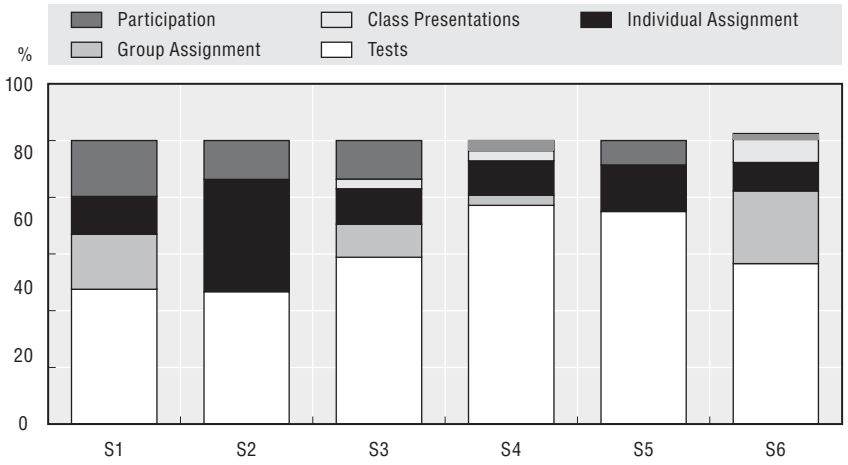
Assessment practices (Figure 3) are consistent with the distribution of skills embedded in the curricula (Figure 2). They also suggest that academic staff should reflect upon their own teaching practices to further enhance

Figure 2. **Transferable skills embedded in the curricula**




*Source:* Oliveira, E. (2009), "Employability, Transferable Key Competencies and Curricular Innovation", presentation based on "Employability and Entrepreneurship: Tuning University and Enterprises", paper presented at the Thematic Cluster Meeting "Erasmus' Contribution to the Bologna Priority Action Lines", Brussels.

Figure 3. **Assessment practices in relation to an undergraduate degree in economics and management studies**




*Source:* Couto, A. (2009), internal document, Faculty of Economics and Management.

expected outcomes, *i.e.* the development of knowledge, aptitudes and skills described in the EU Qualifications Framework and the National Qualifications Framework. In stage four students are also encouraged to self-assess their transferable skills through an online questionnaire, after which they are advised to enrol in an individual coaching programme.

### *Stage five: individual coaching for students*

The coaching programme, which is not mandatory, starts with an explanation of its goals and methodology. Some of the main goals are to raise skill awareness and promote self-reflexivity on skill development opportunities and the continuity of the coaching process. Individual coaching is specifically geared towards the promotion of life-long learning skills. The first step of the coaching programme involves discussing the individual skill self-assessment report produced by the aforementioned online questionnaire. The second step involves identifying students' expectations, goals and needs. An exploratory stage follows, which encourages students to explore vocational experiences and extracurricular activities. The fourth stage leads to identifying the skills that students need to develop further. An action plan is then drawn up, detailing the means and goals of transferable skill development. At the end of the process, students are encouraged to build an individual skills portfolio, a collection of supporting evidence of skills developed during the whole process (FEG/DCO/Equipa PIC, 2008, pp. 9-17). Since the beginning of the coaching programme in 2007, 440 students have been involved in coaching sessions (55% of the total number of students enrolled at FEG). It should be noted that most demand for individual coaching has been from high achievers. Also, in the first year, most demand was from female students (around 75%) although in 2008 there was a gender balance among those seeking individual coaching.

## The three-year programme

To embed skills even further in the curricula, three new courses have been created, focusing specifically on a set of transferable skills. These are Project I (first year), Project II (second year), and Final Project (senior year). Project I addresses critical thinking; Project II promotes communication skills and teamwork. The Final Project encourages students to consolidate their knowledge base and to be autonomous (systemic thinking). This involves applying their knowledge to work or work-related situations and taking responsibility for decision making and the outcomes of their work, even if they are under technical supervision. The three courses constitute a shift in the pedagogical paradigm, *i.e.* from being centred on the teacher to focusing on the student and on learning outcomes. They are incrementally structured, and the curricula reform meets both the EU's and the NQF's specifications which "uses eight references based on learning outcomes (defined in terms of knowledge, skills and competence)" (Portuguese Ministry of Education, 2009). Knowledge is understood as "advanced knowledge of a field of work or study, involving a critical understanding of theories and principles"; skills pertain to "advanced skills, demonstrating mastery and innovation, required to solve complex and unpredictable problems in a specialised field of work or study" and finally, competence serves to "manage complex technical or professional

activities or projects, taking responsibility for decision making in unpredictable work or study contexts; taking responsibility for managing professional development of individuals". Still according to the NQF, education shifts its focus "from input (lengths of a learning experience, type of institution) to what a person holding a particular qualification actually knows and is able to do" (*ibid*).

### *Project I*

Project I aims to develop students' **critical thinking** and literacy. By the end of the semester, students should demonstrate the ability to self-assess their learning process, manage their time, organise learning activities, gather and process information and write and read effectively. By the end of Project I, students should be able to communicate clearly and logically. The learning outcomes are consigned to a learning portfolio, which includes the students' own selection of documentation concerning the activities carried out during the course. The course subject is organised in weekly workshops conducted by teachers with different academic backgrounds. Activities are co-ordinated and a common teaching note ensures a degree of activity and content commonality. Students have access to an online platform and to web tools, such as forums and chats. Students also follow a problem-solving centred methodology providing them with a varied set of activities such as analysing texts, improving literacy skills, analysing media, debating, substantiating ideas, analysing graphs and tables, identifying mistakes, placing a subject in context, using metaphors and taking notes. They also work on image interpretation, assessment and review as well as writing a short film script.

Multidisciplinarity is ensured by including additional subjects in Project I, namely, ethics, macroeconomics, mathematics and accounting: the teachers involved identify essay topics and suggest reading and other reference materials. The interdisciplinary trait of Project I enables students to apply their acquired writing and critical thinking skills to the above-mentioned subjects. To help build the learning portfolios, in 2009 the faculty provided four capacity building workshops on a yearly basis to mitigate students' difficulties. Currently, these workshops are provided on demand. Initially, the idea of building a learning portfolio was new to most of the students who failed to see its purpose and even usefulness. Although students' portfolios were monitored at various stages and they were given feedback, the final version still demonstrated a gap between the aims of the assignment and the actual work delivered. More often than not, the portfolios were merely descriptive and lacked reflection of the course work and achievements. This outcome might be due to the fact that previously workshop attendance was not mandatory and that only 37 out of the 200 enrolled students benefited from it.

### *Project II*

The goal of Project II is to develop **communication and teamwork** skills. By the end of the course, students should be able to work in self-regulated teams and to communicate effectively within a group and to a large audience. The learning outcomes are demonstrated throughout a 15-minute oral presentation that should be imaginative and innovative. In addition, they must submit a 3 000 word report on a temporary assignment conducted in a local manufacturing company. The course has been organised with weekly sessions offering diversified activities such as database research, field studies, oral presentations and communication workshops. There are also supervisory meetings with tutors who, as in Project I, have different academic backgrounds.

Co-operation with the business world takes place in different ways. One way is by having mentors: generally these are senior professionals who mentor a group of students. Mentors typically introduce students to work-related contexts. More specifically, they simulate five job vacancies and students are required to apply for them. Applicants go through a virtual recruitment process entailing CV analysis and the best 10% of each application group undergo a job interview. At the time of writing, internships have been offered to 21 students and company representatives have participated in the classroom activities of 7 courses.

Team coaching is also available to students wishing to improve their teamwork performance. Coaches encourage teams to find alternative and more effective ways to organise their work and stress the importance of anticipating future situations. They promote the development of students' oral communication skills, between team members (in the form of assertiveness) and through contact with the outside world (the ability to deliver a presentation in public). The best overall performers, both as a team and as individuals, as well as those who make the best presentation, are offered a six-week internship in one of the companies with which the faculty has ties, and in 2009 five companies awarded nine internships.

### *Final Project*

The purpose of the Final Project is to encourage **systemic thinking**. In other words, students are encouraged to mobilise, apply and integrate the knowledge learned throughout their three years in college. Students may choose one of three alternatives: carry out an internship; write up a business plan or diagnose a company's performance (in the case of business students) or resolve three case studies (only for economics students). Regardless of the option chosen, students are encouraged to establish contacts with companies and arrange visits and interviews in order to collect data for their final reports. They must also attend meetings with their supervisors every two weeks, except if they are engaged in internships.

As a rule, students work in groups of five and benefit from six hours of team or individual coaching sessions to help them to improve their presentation skills. The purpose is to lead students to reflect, individually or as a team, on the internship, business plan or case studies. They are also encouraged to apply the knowledge they have acquired. At the end of the semester, students give a skills demonstration before a jury consisting of members of academic staff and representatives of local businesses. At the time of writing, 30 representatives of companies and other organisations have participated on juries and evaluated skills presentations.

So far, students who have chosen the Final Project and opted for an internship have provided positive feedback on the experience as a whole. Apparently it increases students' awareness of three things: *i)* the usefulness of academic knowledge previously seen as redundant; *ii)* the impact of individual work on the overall operation of a company; and *iii)* the challenge of meeting schedule requirements. Those who opted to complete a business plan seem to have learned to operationalise business concepts and to find data to support them. Finally, students who conducted organisational or applied studies in economics seem to have understood the role of theoretical knowledge when applied to organisation and economic issues. Overall, this has been a tough and closely monitored process based on trial and error.

## Conclusions

Current emphasis on employability puts universities under pressure to ensure the contexts which enable students to develop the level of knowledge, skills and competences defined by the EU Qualifications Framework and the NQF. The fact that employability focuses on the supply side of labour markets leaves a number of demand-side contingencies out of the equation. Our main concerns are the structure of the Portuguese economy and employers' recruitment practices. The former has created a dearth of jobs for graduates while the latter seem to promote rather than prevent forms of discrimination on the labour market. These may be due to the emphasis on transferable skills, which may overestimate applicants' "personal capital" (Brown *et al*., 2004), that is to say, skills that to a certain extent are the outcome of families' early cultural investments (Brown *et al*., 2004; Bourdieu, 1979; 1986). Empirical studies also suggest that the prestige of a graduate's university may operate as a major recruitment criterion (Guimarães, 2006), which further reinforces the discriminative process referred to above. Thus, promotion of employability must comprise both sides of the labour market.

Another concern is that the corporate discourse on employability has to be challenged. This is because, like many of their counterparts in the United Kingdom (Harvey, 2000), Portuguese employers tend to take graduates'

knowledge base for granted (Oliveira *et al.*, forthcoming). However, unlike the former, Portuguese employers are prone to recruit according to the applicant's degree subject (Guimarães, 2006). Therefore, it is probable that the shortage of jobs for graduates is partially related to employers' vision of the world. In other words, if transferable skills are paramount, then the subject of the first degree should be a secondary issue.

Universities need time to reflect upon such matters, especially in light of data stemming from recent research. However, time has been an issue, since the Bologna process urged EU universities to undertake reform rapidly. As described above, reform at FEG was based on a competency-based approach. The decision to embed the development of transferable skills in three specific subjects (Projects I, II and Final) was the outcome of a discussion involving institutional leaders, academic staff and main stakeholders, employers and alumni. However, FEG would have benefitted from being able to reflect upon the changes to be implemented over a longer period.

The reform process has not yet gained the full co-operation of all members of staff, and in this respect time is still an issue. Fear of downgrading academic standards and job losses has eventually been overcome, but since this is an ongoing process, occasionally negative reactions do occur. It also takes time to build a network which includes alumni and business people, and this is indispensable for ensuring the success of Project II and the Final Project. This process is progressive, and time is needed to ensure that students master skills and knowledge. Moreover, the three new subjects (Project I, II and Final) will not be entirely successful unless students take ownership of their goals, and this too needs time and a change of attitude.

Diversity is yet another issue of great importance. The new subjects call for a multidisciplinary setting, given the multiplicity of assignments, tasks, pedagogical and assessment methodologies, not to mention co-operation with business representatives. Therefore, all the activities as well as the players involved need to be carefully co-ordinated. The overall impact of the three new courses is yet to be fully determined. However, lessons learned so far from the Final Project have helped to structure postgraduate degrees, since university-business collaborative activities have inspired those put in place at postgraduate level. Admittedly, the three new courses have not yet been fully accepted by all students and academic staff. Students still complain about the hard work and tough schedules, and only a third of teachers are currently involved in project-related activities (Project I, II and Final). Hence, there is still a long way to go to reduce the amount of academic and pedagogical conformity which is at the root of teachers' resistance and reaction to the curriculum innovation process. However, it is hoped that the encouraging results of the ongoing assessment will gain the support of many more teachers and students.

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# ANNEX A1

## *A brief description of the online self-assessment questionnaire*

The questionnaire comprises three sections. The **first section** relates to vocational experiences that significantly facilitate the development of transferable (or "soft") skills. It includes work experiences, volunteer work, civic engagement, geographic mobility and further training. Students are expected to rate such experiences according to their relevance and duration.

The **second section** – the skill assessment questionnaire – comprises a set of 17 soft skills organised into four groups:

*i)* Methodological skills (problem solving; systemic thinking; personal management; creativity).

*ii)* Social skills (communication, assertiveness; interpersonal relationship; team work).

*iii)* Skills related to values and attitudes (persistence; responsibility; integrity and ethics).

*iv)* Learning skills (motivation to learn; openness to change; pursuit of quality and excellence; knowledge management).

The **third section** assesses the vocational development of students using Savickas' paper "Student Career Concerns Inventory" (2002), adapted by Ramos *et al.* (2002).

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# What factors influence peer ratings of faculty research performance in the United States?

*by*
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*Peers play a significant role in assessing faculty members' performance and in determining others' career outcomes, such as tenure and promotion. However, the literature is fairly silent on how faculty members formulate their impressions of others' performance. As part of a larger study, this paper explores factors that significantly correlate with peer ratings of research performance and the reliability of peer ratings. Using a random sample of 236 faculty members from a wide range of accredited business schools in the United States, the authors conducted a web-based survey of faculty in business management to examine the predictors of peer ratings of research performance. Implications for research and practice are discussed.*

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# Quels facteurs influencent l'évaluation par les pairs de la performance de la recherche universitaire aux États-Unis ?

*par*
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*Les pairs jouent un rôle significatif dans l'évaluation de la performance des universitaires et dans la détermination des résultats professionnels obtenus par les autres, tels que la période d'occupation des postes et les promotions. Cependant, il existe très peu d'informations sur la manière dont les universitaires donnent leurs impressions sur la performance des autres. Dans le cadre d'une étude plus poussée, cet article analyse les facteurs étroitement liés à l'évaluation de la performance de la recherche par les pairs et à la fiabilité des évaluations effectuées par les pairs. Sur la base d'un échantillon de 236 universitaires issus de diverses écoles de commerce agréées aux États-Unis, les auteurs ont mené une enquête en ligne auprès du corps enseignant en gestion d'entreprise en vue d'examiner les indicateurs utilisés par les pairs pour évaluer la performance de la recherche. Des suggestions en matière de recherche et de pratique y sont exposées.*

## Introduction

Faculty research performance continues to dominate much of higher education as a primary of faculty members' success (Clement and Stevens, 1989). Compared to teaching and service activities in public higher education institutions, studies have found that faculty research performance is significantly more predictive of distributed rewards, such as merit pay (Schulz and Tanguay, 2006). Business schools have even been criticised for placing an overwhelming emphasis upon research rigour (Bennis and O'Toole, 2005). Nevertheless, the fact is that research productivity plays, and will continue to play, a primary role in appraisals of faculty performance particularly in doctoral-granting institutions (Shepherd *et al.*, 2009) and accredited business schools (Stanton *et al.*, 2009).

Peers play a critical role in the determination of faculty career outcomes, including promotion, tenure and retention decisions (Meho and Sonnenwald, 2000). However, there is a paucity of research exploring how faculty members formulate their impressions of others' research performance or the reliability of peer ratings. Given the central role of peers in academic career decisions, it seems important to better understand what factors drive peer perceptions and whether those factors appear fair and relevant. In this study, we examine factors that influence peer ratings of faculty research performance, as well as the reliability of peer ratings, using a random sample of 236 faculty members from a wide range of AACSB-accredited[1] schools. We conducted a web-based survey of faculty in business management as part of a larger study to examine the driving factors influencing peer ratings of research. The presentation and analyses of our data are designed to be useful to administrators, faculty and peer evaluation committees from a decision-making perspective.

## Literature

Peer ratings, evaluations, judgments and rankings have played a vital role across many types of evaluation and performance decisions in academe. Indeed, peer evaluations "are widely perceived as an acceptable and respected academic norm for evaluating the research performance of faculty members" (Meho and Sonnenwald, 2000, p. 123). A peer is defined in the current study as a colleague within a target faculty member's discipline. The peer may be located within the target person's department, as is the focus in the current

study, but peers at another university within the same discipline can also be involved in academic decisions (*e.g.* tenure).

Evaluations of faculty research performance by peers typically centre on published works; the faculty member's published works are assessed for their contribution to the discipline, literature and scientific body of knowledge (van Raan, 1996). In most evaluation scenarios the individual's curriculum vitae (CV) is presented to his or her peers for review. Assessments can be made in the form of publication counts or by using systems that contain certain evaluative or weighted scales for different kinds of publications (Meho and Sonnenwald, 2000) such as books, book chapters, articles in refereed journals or non-refereed journals, conference proceedings, etc. This brings us to a discussion of the reliability of peer ratings in academe and in broader organisational research.

### *Reliability of peer ratings*

In a study by Lawrence Root (1987), evaluations of faculty performance for the purpose of salary increases were analysed in terms of their reliability. Six elected peers of the faculty provided independent ratings of faculty performance. The average inter-correlations among the peer ratings were 850 for research (and 603 for teaching). Based on the data, the reliability of the six-person peer group (*i.e.* a composite reliability) was estimated to be over 959 for the overall faculty ratings. This study therefore provides a sense of confidence in the consistency of peer ratings of faculty research performance in academic settings.

In another study of peer review systems used in grant applications by Miner and McDonald (1981), peer reviews of summer faculty fellowship applications and regular research grant applications were examined. This study revealed potential reliability problems as peer reviewers sometimes applied different criteria in evaluating the merit of the grant proposals, particularly those in other disciplines. Miner and McDonald claimed that peer reviewers varied on their assessment of "scientific merit" of the various submitted proposals and were affected by other considerations, hence producing a low inter-rater reliability. Their study points out the difficulty of garnering consistent peer reviews **across** disciplines and for criteria other than research or teaching performance, arguably the two central components of academic contribution by faculty in universities. The current study's focus is on faculty from one discipline, business management, and thus the peer ratings of faculty performance should be more consistent.

The topic of peer ratings has garnered more research attention in the broader organisational context compared to the academic setting. Across this literature, peers are frequently viewed as especially valuable sources of

performance information (Greguras *et al.*, 2001; Murphy and Cleveland, 1995) and are often chosen to provide assessments of performance (Maurer *et al.*, 1998), such as in team-based settings (Reilly and McGourty, 1998) or self-managing work groups (Saavedra and Kwun, 1993). Therefore, peer ratings of performance are valued in both the general organisational milieu as well as in academe.

In a meta-analytic study by Conway and Huffcutt (1997), the psychometric properties of peer, supervisor, subordinate and self ratings were analysed. Inter-rater reliabilities within source and between sources were examined, and different jobs were included in the sample. These authors found supervisor ratings exhibited the highest average reliability, followed by peer ratings (37). As such, peers were able to provide fairly consistent assessments of others' performance across a variety of jobs. In addition, the study reported that the highest correlations for performance ratings were reported for the supervisor-peer duo; these sources' ratings were correlated at 34. Other organisational and management researchers have similarly found peer ratings as reliable, valid and useful forms of performance criteria (Drexler *et al.*, 2001; Kane and Lawler, 1978; Saavedra and Kwun, 1993). Thus, we expect to find that ratings of faculty members' research performance by academic peers in the department will be reliable (*i.e.* there will be a high level of inter-rater agreement).

### *Determinants of peer ratings*

Regarding studies of contextual influences on peer ratings in broader organisational research, Dierdorff and Surface (2007) examined influences on peer ratings outside of the ratee's performance. Dierdorff and Surface reference a theory of rating (Wherry and Bartlett, 1982) which is composed of three primary factors: the ratee's actual job performance (true variance), the rater's recall and perceptual bias (non-random error) and measurement error. The authors therefore reiterate that in peer performance ratings both systematic and unsystematic influences exist. While this broad conceptual model is important for understanding sources of influence on peer ratings, one critical and frequent point made by Dierdorff and Surface (2007) is that empirical work is needed to explicitly examine the systematic determinants of peer ratings of performance; in other words, what specific factors influence the formation of peer ratings?

Variables that relate to or influence academic peer ratings have not received much research attention in the academic setting. In one of the few published studies on this topic, Sonner (1995) examined the determinants of peer evaluations of scientific performance in the field of biology – similar to the thrust of the present study. Specifically, six biologists were asked to rate 42 former National Science Foundation postdoctoral fellows' CV and bibliographic information. The most influential predictor of the peer ratings of scientific performance was the target biologist's annual research productivity

rate, explaining more than 40% of the variance in the peer evaluation measure. Such outcome-oriented indices of research productivity are easily accessible and countable (*via* a review of the target's CV), thus contributing to peer evaluation in a straightforward fashion.

In summary, in the current study, we assess the reliability of peer ratings and investigate the variables that influence peer ratings of research performance within academe. We explore both personal attributes of the target being rated, such as his/her demographics and disposition, along with contextual variables such as the target's resource availability (*e.g.* doctoral support, summer support for research), and finally more output-oriented, objective indicators that could inform peer ratings of research performance such as the number of the target's journal publications. If person-centric variables are more highly correlated with peer ratings, this would indicate a more politically-infused process by which peer ratings are generated; indeed, personality variables have been linked to political skills and measures of job performance in organisations (Blickle *et al.*, 2008; Liu *et al.,* 2007). If, however, more objective indicators of research performance are correlated with peer ratings, as in Sonner's (1995) study of determinants of peer ratings in the biology field, this would suggest a more objective approach by which peer ratings are shaped. Next, we describe the method used in this study.

## The web-based survey method

### *Sample and data collection procedures*

As part of a larger study, 200 accredited business schools across the United States were randomly selected from AACSB International's website (*www.aacsb.edu*). Non-US universities were eliminated to help minimise potential confounding effects (*e.g.* culture, language). E-mail addresses for full-time management faculty were then gathered; adjuncts, instructors, visiting professors, departmental chairs or those with administrative responsibilities (*e.g.* programme director) were not included in the sample. Institutions were eliminated from the sample if the institution chose not to publish faculty e-mail addresses, if the institution's website was inaccessible after three attempts, or if the university requested to be removed from the study. Faculty members requesting removal from the study were also accommodated. Ultimately, we obtained 1 650 valid faculty e-mail addresses representing a cross-section of 157 AACSB-accredited institutions.

Data to test our hypotheses were collected electronically in two phases *via* html-based survey questionnaires.[2] Moreover, data were collected across two time periods (Time 1 and 2) to minimise common method variance (Podsakoff and Organ, 1986). In Phase I, several pre-tests of the survey and our web-based data solicitation and collection process were conducted; changes

in survey instructions and/or procedures were made based on feedback to enhance item/survey clarity and data validity (Burke and James, 2005). A pre-notification e-mail message was sent to all potential respondents five days before the initial e-mail survey invitation was delivered to enhance the response rate. The ultimate survey invitation included a brief explanation of the study, a unique participant number that respondents used to enter the survey website, participation incentive details, and a link to the html survey website. A reminder was sent to non-respondents ten days after the initial invitation, and a second reminder was sent a week after that, two days before the survey site closed. As our sample consisted of academics, we used a lottery for online gift certificates from Amazon.com as an incentive.

The survey invitation and subsequent reminders resulted in an initial response rate of 19.69% (n = 365 of 1 650) of management faculty from across 82.16% of the business schools sampled (n = 129 out of 157). Screening questions designed to identify persons with full- or part-time administrative duties, or those whose primary teaching responsibilities were in some area outside of management, resulted in the elimination of those respondents from both the sample frame and the respondent pool. Valid data were ultimately collected from 71.34% (n = 112 of 157) of the initial institutions surveyed; the final individual-level response rate of 17.81% (n = 236 of 1 325) is conservative, as the number of non-respondents who would have initially been eliminated from the sampling frame (due to ample administrative or teaching responsibilities outside of the management area) cannot be estimated accurately. This rate is consistent with the rate in a similar study using a web survey (*e.g.* 22% in Dubb *et al*., 2001).

The purpose of Phase II of the process was to collect peer data. Customised html surveys listing the names of faculty who had responded in Phase I were created for each institution from which an initial response was collected. Approximately ten days after the end of Phase I, initial respondents were sent an e-mail invitation to participate in a short follow-up online survey to which 54% of them responded. The demographics of those responding to the first and second surveys were highly similar. Specifically, 67.3% of Phase I respondents were male (*versus* 67.5% in the second survey), 64.8% (66.4%) were tenured, and 91.9% (92.6%) worked at a main *vs*. branch campus location. Professional rank was also consistent, as 34.7% of the respondents to the initial survey held the rank of assistant professor (*versus* 34.3% in the second survey), 31.4% (32.0%) were at the associate level, and the remaining 33.9% (33.6%) had earned full professor.

### *Measures*

Measures were gathered from the target faculty member including demographic, dispositional, resource availability and research output

variables. The peer research rating was gathered from the target's peer faculty members within the department. All measures are outlined below.

### *Demographics*

Demographic measures collected included sex (1 = female; 2 = male) and whether English was the person's first language (1 = no; 2 = yes).

### *Disposition*

Measures for each of the "big-five" factors of personality, one of the most common measures of personality, were used from the International Personality Item Pool (IPIP, 2001; Goldberg, 1999). Each dimension was assessed on a six-point Likert scale *via* ten items anchored by "strongly disagree" to "strongly agree." Coefficient alphas for each personality dimension were acceptable, exceeding the 0.70 level recommended by Nunnally (1978). Specifically, the coefficient alphas found in this study are as follows: conscientiousness: 0.83; openness to experience: 0.77; emotional stability: 0.88; extroversion: 0.86; agreeableness: 0.83.

### *Resource availability*

If the target faculty member reported having **doctoral student support** for research this variable was coded a2; otherwise it was coded a1. The faculty members' **time available for research** was assessed using a two-item, six-point Likert scale ("I am able at my university to allocate sufficient time to my research") and anchored by "strongly disagree" to "strongly agree". Reliability was assessed using coefficient alpha and was found to be acceptable (0.92).

### *Research outputs*

Faculty members were asked several open-ended questions in Phase I of the study to gather output-oriented evidence of their research performance. Included was the **number of research awards** earned over his or her career, as well as the number of **refereed journal articles** and **book chapters** published in the past five years.[3] Subjects were also asked to indicate the per cent **of co-authored works** in their repertoire of published work.

### *Peer ratings of target's research performance*

Peer ratings of research represent the criterion variable for this study. Phase II of the data collection process collected peer ratings of the targets' research performance. We asked respondents to our first survey to assess, confidentially, the research performance of those individuals from their university who responded to the first survey, thereby providing peer data. Rating responses available included: "weak", "fair", "good", "very good", "best",

"no research responsibilities", "not able to judge", or "not a faculty member in the department". Each of these response options was defined in the survey; for example "weak" was defined as research performance in the bottom 10%. See Annex A1 for more detailed information on this measure.

To measure the reliability of the peer ratings gathered for subjects' research performance, inter-rater agreement was assessed using the $r_{wg}$ index (James *et al.*, 1984). James *et al.*'s $r_{wg}$ measure is defined by the formula: $r_{wg} = 1 - (s^2_x/s^2_{eu})$, where $s^2_x$ is the obtained variance of respondent ratings, and $s^2_{eu}$ is the variance of uniformly distributed error. The term $s^2_{eu}$ equals $(c^2 - 1)/12$, where c is the number of response categories. Negative values are obtained in this formula when the respondent ratings have a variance greater than that associated with a uniform distribution (*i.e.* indicating low inter-rater reliability for the measure) (James *et al.*, 1984). For the present study, only peer data achieving positive $r_{wg}$ scores were used for data analysis purposes. The average $r_{wg}$ index in our study was 0.71 for the peer ratings, which indicates an acceptable level of inter-rater reliability. There were three cases where a subject's peer rating was composed of three or more peer's inputs and the $r_{wg}$ was negative; in these cases, the one peer rating outlier was eliminated and the $r_{wg}$ was re-calculated. Ultimately, 115 peer ratings were garnered in our study.

### *Results*

Descriptive statistics and bivariate correlations are presented in Table 1. Here, none of the demographic or personality variables were significantly correlated with the criterion variable of peer ratings of research. Thus, a faculty member's sex, native language, extroversion, agreeableness, conscientiousness, openness, or emotional stability did not influence the peer ratings of research performance in this study. This result would suggest that peers are generally not influenced by personality or demographics when generating their perceptions of a colleague's research performance. However, resource-availability variables were correlated with peer ratings; for example, if the target faculty member reported having doctoral research support ($r = 0.26$, $p < 0.01$) or reported having more time available to conduct research ($r = 0.37$, $p < 0.01$), peers rated his/her research performance higher. Positive correlations with the criterion variable were found for the output-oriented indicators of research performance gathered: namely, the target's number of journal articles ($r = 0.38$, $p < 0.01$), number of book chapters ($r = 0.31$, $p < 0.01$), number of research awards ($r = 0.25$, $p < 0.01$), and per cent of co-authored works ($r = 0.16$, $p < 0.10$). This result suggests that peers tend to be influenced by documented measures of research output when generating their perceptions of a colleague's research performance.

Table 1. **Descriptive statistics and bivariate correlations**

| Variable | Mean [SD] | Peer rating of research |
|---|---|---|
| **Demographic** | | |
| Sex | 1.67 [0.47] | –0.10 |
| English: native language | 1.91 [0.29] | 0.05 |
| **Disposition** | | |
| Conscientiousness | 4.42 [0.78] | 0.09 |
| Openness to experience | 4.88 [0.58] | –0.03 |
| Emotional stability | 4.04 [0.93] | –0.05 |
| Agreeableness | 4.93 [0.64] | –0.03 |
| Extroversion | 3.98 [0.89] | 0.02 |
| **Resource availability** | | |
| Doctoral student support | 1.28 [0.45] | 0.26** |
| Time available for research | 3.57 [1.45] | 0.37** |
| **Output-oriented** | | |
| Number of journal articles | 5.61 [4.85] | 0.38** |
| Number of book chapters | 1.38 [1.79] | 0.31** |
| Number of research awards | 1.67 [2.11] | 0.25** |
| Per cent of co-authored works[a] | [4.53] [1.49] | 0.16♦ |

♦ ≤ 0.10; *P ≤ 0.05; **P ≤ 0.01; N = 236.

*a)* 1 = 0%; 2 = 1 – 20%; 3 = 21 – 40%; 4 = 41 – 60%; 5 = 61 – 80%; 6 = 81 – 100%

## Discussion and implications

Based on these results, we can conclude that: *i)* peers can reliably rate other faculty members' research performance, and *ii)* the variables most correlated with peer ratings of research performance generally tend to be more output-oriented and verifiable (*e.g.* number of journal article publications, number of doctoral students), rather than person-centric demographic or dispositional factors. These findings indicate that peers are inclined to rely upon more objective and valid sources to generate ratings of a colleague's research performance, which is reassuring given the heavy reliance placed upon peer assessments in academe. In other words, tangential measures such as a colleague's personality, which arguably might be manipulated to politically influence the perceptions of academic peers (Campbell, 1987), were found to be unrelated to peer ratings of research.

Limitations of this study, as with all studies, exist. Only research productivity was examined (*versus* research quality), and while the response rate was reasonable it was not ample. In addition, other variables likely to influence peer ratings were not investigated in our study. That said, confidence in our findings stems from invoking a multi-phase survey approach, a web-based survey methodology enhancing data integrity, collection from multiple sources across several criterion measures, a

sufficiently sized, randomly drawn sample, an element of statistical and (quasi) experimental control and the use of reliable measures.

### *Implications for research*

In terms of future research, there is ample opportunity for meaningfully studying peer ratings in the academic context, especially when considering the progress made in the broader organisational literature. We agree with Dierdorff and Surface (2007) that research is needed to investigate the systematic sources of variance that underlie peer ratings. One possible variable producing systematic variance is the target faculty member's perceived reputation as a researcher within the field. Hochwater *et al.* (2007) investigated reputation as a moderator of political behaviour and work outcomes and acknowledge the important influence that personal reputation can have on work-relevant outcomes such as performance ratings. Interestingly, their findings also indicate that self-reports of personal reputation were significantly related to peer reports of reputation, indicating a tendency for the target and peers to agree on research reputation. And for those with a favourable reputation, their political behaviour was associated with increased job performance ratings. A similar investigation could be performed with an academic sample.

The current study focused on indices of research productivity (*i.e.* research quantity) as correlated with peer research ratings; however it is likely that quality indicators also play a role in peer research ratings. In future work, the influence of the number of top-tier journal publications could be compared to the influence of second-tier publications or books to determine whether outlet source (*i.e.* quality) is a determinant of peer ratings. The number of citations for published works is also a measure of research quality that could be examined. To the extent that these quality measures correlate with peer ratings of research performance practical implications for the organisation, format and presentation of faculty members' CV could follow.

Another moderating factor that may influence peer ratings (especially among AASCB-accredited business schools) could stem from the "type" of research conducted. As such, future research might seek to examine attitudes towards discipline-based research, learning and pedagogical research, and contributions to research practice, both at the individual (peer evaluator) and institutional (college or university) level. It might also seek to examine their corresponding influence on peer ratings. Many institutions require research reviews by external faculty in addition to the internal peer review process for the purposes of tenure. Researchers could therefore investigate the evaluation process used by external reviewers and the extent to which external evaluations of research match internal peer ratings. Lastly, it might be useful

to investigate faculty members' perceptions of the peer review process to ascertain whether it is perceived as fair, unbiased and effective.

### *Implications for practice*

According to Bailey *et al.* (2008, p. 68), "The success or failure of a faculty member's research projects is a major component in most academic institutions' determination of compensation, promotion and tenure. Given the importance of this metric, the peer review process should be designed to provide an objective review of each project's contribution to research". Echoing these authors' assertions, and grounded in the current study, a few practical implications can be advanced in this regard.

It is advisable for faculty (peer) committees to articulate and communicate specific, objectively conceived variables that will be considered in their evaluation of peers' research performance. This plan of action could help to ensure that candidates' submitted portfolios are then designed and organised around the criteria of interest in the peer review (*e.g.* the number of citations for each journal article as an index of research quality). Within the committee, there could also be a discussion of any indicators that may be too indirect, subjective, irrelevant or invalid to rely upon in the decision-making process. Perhaps faculty members could even be trained by evaluation experts in the skills necessary to conduct fair and effective peer evaluations.

It appears that the literature on the methods, process and structure surrounding peer review of college teaching performance is more established (*e.g.* Centra, 1979; Cohen and McKeachie, 1980; Paulsen, 2002; Seldin, 1999) than the literature on peer review of academic research performance. Multiple methods and sources for peer teaching review are available and discussed throughout the extant literature. For example, to assess teaching performance peers utilise in-class observation and videotaping of teaching performance. They also review students' quantitative and qualitative evaluations along with faculty syllabi, assignments, teaching philosophies and teaching portfolios (Cohen and McKeachie, 1980; Paulsen, 2002; Seldin, 1999). A similar degree of attention to the measures and criteria that could be used for evaluating faculty research performance would thus be helpful.

Table 2 offers a summary of potential criteria for assessing faculty research performance. Some of the more common criteria used to assess research performance, as discussed earlier, include (weighted) publication counts of different types of published works (*e.g.* journal articles, books, book chapters, international, national, or regional conference proceedings, presentations or abstracts) (Meho and Sonnenwald, 2000), along with their respective length or scope. Works that are produced *via* a double-blind, peer-reviewed process[4] (*e.g.* articles in certain journal outlets) may also be given more weight than those

Table 2. **Summary of potential criteria for assessing faculty research performance**

| |
|---|
| **Criteria dealing with the published work itself** |
| Counts (weighted) by publication type (*e.g.* journal articles, books, book chapters, conference proceedings, conference presentations, abstracts, etc.) |
| Length and scope of published work (theoretical and/or empirical contribution) |
| Geographic outreach (*e.g.* international, national, regional, or local conference presentation) |
| **Criteria dealing with authorship** |
| Authorship order of the published work (*e.g.* 1st *versus* other) |
| Number of authors on the published work (*e.g.* single *versus* multi-authored work) |
| Number of co-authors within and/or outside the department |
| **Criteria stemming from accreditation** |
| Relative number or mix of works in different categories (*e.g.* discipline-based; contribution to practice; learning/pedagogical) |
| **Criteria surrounding the review process used** |
| Review process utilised (*e.g.* double-blind, peer reviewed; single-blind, peer reviewed; non-blind peer review; no peer review; editor-only review) |
| **Criteria surrounding the outlet for the work** |
| General reputation of the outlet in the discipline/field |
| Listing in centralised publication directory in the field (*e.g.* Cabell's) |
| Impact factor (Thomson Reuters) |
| Compositions of the editorial board or board of reviewers |
| Acceptance rates |
| History of the outlet (how long has it been in existence) |
| Format (print *versus* electronic) |
| Volume of readership |
| Article placement within the outlet's volume/issue |

not subjected to the same scrutiny (*e.g.* an un-reviewed book). Authorship order can be considered (with first-author roles given the most weight and decreasing as the author's name moves down the author list), as well as the proportion of single-authored publications *versus* multi-authored works (*i.e.* the presumption being that single-authoring a publication signifies a more significant contribution to the outcome and probably a broader competence across all phases of the research process). Some business schools, especially those that are AACSB-accredited, may review the member's publications by genre and encourage a mix of certain types including: discipline-based research, learning and pedagogical research and contributions to practice research.[5]

The outlet for the published work could also be examined to evaluate a faculty member's publication record. This evaluation could include an assessment of the outlet's reputation in the discipline, listings in centralised publication directories in the field (*e.g. Cabell's Directory of Publishing Opportunities in Management*), relevant rankings of the outlet such as the "impact factor"[6] of a journal (*e.g.* the Thomson Reuters Impact Factor), as well

as the outlet's editorial board and publisher. In relation to journal publications, considerations could include the journal's acceptance rate, the article's placement within the volume/issue (*e.g.* lead articles may be more heavily weighted than those contained at the end), the length of time the journal has existed, the format of publication (print *versus* electronic) and the volume of readership. In sum, university departments could use a combination of criteria, such as those listed in Table 2, to customise their discipline's needs for peer review.

Beyond the types of measures, sources, and criteria used to assess research performance, it may also behove universities and departments to evaluate their peer committee structures used for faculty assessment. A presentation by Arreola (2004) at the Centre for Educational Development and Assessment contains various ideas for assessing faculty performance using peer review systems.[7] Various peer committee structures are offered by Arreola as alternatives. For example, one alternative is a Triad Peer Review Committee Structure composed of three members: Peer 1 selected by the department head, Peer 2 appointed at large, and Peer 3 selected by the faculty member under review. This innovative idea could work to further ensure a focus on valid measures and the minimisation of any political influences on rater assessments, while maintaining a sense of involvement and procedural fairness for both the ratee and administration. Further research on the reliability and validity of peer ratings in such a committee structure compared to other approaches could also be informative for ensuring valid decision approaches in academe.

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## Notes

1. AACSB stands for Association to Advance Collegiate Schools of Business. AACSB is "devoted to the advancement of higher education in management education. It is also the premier accrediting agency of collegiate business schools and accounting programs worldwide." See *http://aacsb.edu/about/aboutus.asp*.
2. One advantage of survey software is that it enhances data integrity by setting response validation parameters to ensure appropriate data were being submitted during the keying phase. For example, if a number was required in a certain data field, then alphabetical characters were not accepted; if a 4-digit number was required above or below a minimum/maximum level, then entries other than this were not allowed. Survey construction choices allowed for questions to be designated as single response, multiple responses, open-ended, rating and ranking; once so designated, the software verified answers.
3. The last five years was used as AACSB imposes a 5-year curriculum limitation when evaluating business faculty members' contributions.
4. Double blind means that the reviewers' and authors' identities are masked from each other. Single-blind peer review is where the reviewer knows the identity of the author but not *vice versa*. See *www.ncbi.nlm.nih.gov*.
5. See *http://www.aacsb.edu/accreditation/business-standards-2009-Final.pdf*.
6. The impact factor is a measure of the frequency with which the average article in a journal has been cited in a particular year or period. *http://thomsonreuters.com/products_services/science/academic/impact_factor*.
7. See *www.uncfsu.edu/evaltaskforce/pdf/Documents/facultyevalsystem.pdf*.

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# ANNEX A1

## Peer ratings of research performance

For each of the faculty members in your department whose names are listed below, please answer the following questions about their research performance. Please know that we do not want, nor are we asking for internal performance data.

For comparisons please use the following scale:

- Weak = weak or bottom 10%
- Fair = fair or next 20%
- Good = good or next 40%
- Very good = very good or next 20%
- Best = best or top 10%
- No research = This individual has no current RESEARCH responsibilities.
- Not faculty = This individual is no longer on faculty at our university.
- NAJ = Not able to judge

Compared to all other professors teaching in this department (not just those individuals whose names are listed below), I would rate the following individual's current RESEARCH performance as:

- Weak
- Fair
- Good
- Very good
- Best
- No research
- Not faculty
- NAJ

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# Knowledge production within the innovation system: a case study from the United Kingdom

*by*
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*This paper focuses on a key issue for university managers, educational developers and teaching practitioners: that of producing new operational knowledge in the innovation system. More specifically, it explores the knowledge required to guide individual and institutional styles of teaching and learning in a large multi-disciplinary faculty. The case study presented outlines a sustainable approach for achieving quality enhancement of teaching and learning and producing new operational knowledge. Sustainability is achieved by linking to, and being sympathetic to, the innovative activity-led concept of learning reported in this paper. This leads to the identification of elements of evaluation that are appropriately aligned to the teaching and learning behaviours, attitudes and approaches that are critical for the innovation to be successful. Such context-sensitive evaluation elements allow meaningful feedback for the purposes of creating new operational knowledge that may then be applied and tested for on-going refinement and learning.*

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# Générer de la connaissance au sein du système d'innovation : une étude de cas au Royaume-Uni

*par*
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*Cet article se concentre sur un problème clé rencontré par les directeurs d'universités, les conseillers pédagogiques et les praticiens de l'enseignement : celui qui consiste à produire une nouvelle connaissance opérationnelle au sein du système d'innovation. Plus précisément, il explore la connaissance requise pour orienter les méthodes individuelles et institutionnelles d'enseignement et d'apprentissage au sein d'une faculté multidisciplinaire. L'étude de cas présentée souligne une approche durable permettant d'améliorer la qualité de l'enseignement et de l'apprentissage et de produire une nouvelle connaissance opérationnelle. La durabilité est obtenue en étant associée et en harmonie avec le concept innovant dirigé par l'activité d'apprentissage exposé dans ce document. Cela permet d'identifier les éléments d'évaluation appropriés qui s'alignent sur les comportements, les attitudes et les approches d'enseignement et d'apprentissage essentiels pour parvenir à l'innovation. Ces éléments d'évaluation contextuels fournissent des informations significatives pour la création d'une nouvelle connaissance opérationnelle qui pourra ensuite être appliquée et testée afin d'assurer un suivi permanent de l'amélioration et de l'apprentissage.*

## Introduction

A recent OECD report highlights the implications for institutional actors of engagement in quality teaching. In particular it emphasises that:

> A quality culture at institutional level can be better achieved through diverse initiatives, the consolidation of bottom-up initiatives, small-sized experiments at course or programme level, replication of success stories, the evaluation of quality teaching as a vehicle of discussion, and the participation of technical and administrative staff to provide mediation between academia and students. (OECD, 2009, p. 8)

The Faculty of Engineering and Computing (EC) at Coventry University is instituting the above activities within an activity-led vision and concept of learning (Wilson-Medhurst *et al.,* 2008; Wilson-Medhurst and Glendinning, 2009). This vision aims to develop communities of learners engaged in employer and profession-focused activity-led education. Working definitions of the associated pedagogy, known as Activity Led Learning (ALL), are presented in Wilson-Medhurst *et al.* (2008) and Wilson-Medhurst and Glendinning (2009). Two key features of ALL are that the activity is the starting point for engagement in learning and that the tutor acts as facilitator. The learning process itself requires "a self directed ... process in which the individual learner, or team of learners, seek and apply knowledge, skilful practices, ... and resources (personal and physical) relevant to the activity [being undertaken]." (Wilson-Medhurst *et al*., 2008, p. 2)

This paper explores how the ALL concept of learning constitutes an innovation in response to the need for organisational adaptation. It then explores how this concept of learning frames the challenge of converting information into operational knowledge that guides individual and institutional styles and practices of teaching and learning.

Operational knowledge is defined here as a form of knowledge that is distinct from disciplinary knowledge, and is associated with the way a university goes about its day-to-day activities. It is held or embodied in a university's values, policies and practices (James, 2001). The Coventry EC case study presented below serves to illustrate how the above operational knowledge production challenge is being approached within a large multi-disciplinary Engineering and Computing faculty with over 4 000 students.

## The challenge

In response to external pressures, "universities have become compelled to look for structures and processes better suited to frequent adaptation" (James, 2001, p. 43). As James also observes, teaching is the site of much of the change and adaptation due to three pressures in particular: the growth in higher education (HE) participation and the associated diversity of the student population, changes in student-teacher relationships and the impact of technology on the forms of learning and learning delivery that are possible (James, 2001).

In this UK case study context the activity-led concept of learning (ALL) is the innovation that of itself allows an adaptive response to the demands of the various faculty disciplines as well as the challenges outlined above. At the same time it provides a framework of operation that guides learning support, learning facilities and the roles of staff and students. It also lends itself to context-sensitive evaluation and measurement, as will be explored below.

James (2001) articulates five tentative principles for strengthening the adaptive capacity of universities:

- Recognise that the department/centre is the key learning unit.
- Consciously build feedback loops.
- Establish clear, agreed and measurable objectives.
- Encourage experimentation, tolerate error.
- Create nodes for knowledge diffusion.

These principles accord well with the findings of the fore-mentioned review of quality teaching in HE (OECD, 2009). However, the publication also acknowledges that achieving sustainable change in relation to learning and teaching is challenging, partly because measuring teaching quality is complex and difficult. This complexity is reflected in the following barriers or learning inhibitors to organisational adaptation within universities (James, 2001):

- Feedback on organisational performance in HE is often ambiguous.
- There are lengthy delays in the feedback loops.
- Causal links between actions and outcomes are unclear.
- Universities have individualistic cultures.
- Quality assurance has often been a top-down activity.

## The measurement problem

As suggested above, lengthy delays in the feedback loops and problems establishing causal links between actions and outcomes all contribute to the measurement difficulties associated with assessing teaching quality. Higher

Education therefore looks for measurement opportunities with short-loop feedback properties that can serve as adequate proxies for longer-term outcomes (James, 2001). In the UK, the student satisfaction survey, known as the National Student Survey (NSS) (HEFCE, 2009) is just such a proxy for teaching quality. However the NSS, as with local variants such as the Coventry University student satisfaction survey based on the student satisfaction approach pioneered by the Centre for Research into Quality (CRQ, n.d.) do suffer from the limitations associated with the top-down quality assurance initiatives outlined above.

Surveys like the NSS may identify teaching quality deficits, and this often leads to the challenge of developing new operational knowledge to address the deficit. Such knowledge must be understood and owned by teachers and students. As Ramsden notes with reference to the Course Experience Questionnaire which predated the NSS, "evidence of how a course or department has responded to student evaluation data – the capacity of its teachers to learn from their mistakes – might be regarded as one of the most important indexes of its educational effectiveness" (Ramsden, 1991, p. 134). However one cannot assume that the operational knowledge is already "*in situ*" and it may need to be developed.

Therefore, in examining organisational knowledge and learning and moving towards a "learning organisation" (Senge, 1990), James (2001) suggests that "to develop universities into more effective learning organisations requires deeper insights into their present systems and structures for organisational learning, and into the kinds of steps and arrangements that support the creation and application of new organisational knowledge". James goes on to observe:

> Given the complexity of university operating environments and their missions, the knowledge guiding day-to-day practices is likely to be uncertain and "error" prone – using "error" here in a technical sense to refer to mismatches between expectations and outcomes. Under these circumstances, error prevention through rule-based management is unlikely and learning from error becomes the principal means for advancement; that is, the safest strategy for improvement is to nurture systems for learning from experimentation and feedback. Localised problem-solving will be optimised by conditions that foster and maintain experimentation, that are forgiving of risk-taking, and that maximise feedback. (James 2001, pp. 47-48)

Given the above challenges, what is suggested here is that quality enhancement of learning and teaching can be achieved through feedback mechanisms that are better aligned to the concept of learning within which the feedback loop operates. A key operating principle is that the evaluation of

quality teaching is used as a vehicle of discussion as the OECD (2009) publication recommends. This is consistent with the operating philosophy of ALL which places an emphasis on active (and open) engagement by all in the learning process. This dialogue around quality requires not only a top-down flow of centrally collected evaluation data (such as the NSS and Coventry University satisfaction survey data that in part inspired the ALL initiative) but also an effective counter flow of bottom-up feedback such as locally collected evaluation data. This paper focuses on the creation of this effective counter flow. Such bottom-up feedback should ultimately lead to more context-sensitive performance indicators for staff, students and managers for the purposes of enhancing the quality of teaching.

## Introducing the case study context

The EC faculty at Coventry University faces a significant evaluation challenge. ALL is being developed and implemented through a continuous improvement change management process (Wilson-Medhurst *et al.*, 2008). Within this context there was an initial focus on evaluating "what works" (or not) at the modular level and identifying case studies of operation (see *e.g.* Booth and White, 2008; Davies, 2008; Davis and Davies, 2008; Lambert *et al.*, 2008). This was followed by a more systematic review of the first year students' experience of ALL at programme level in one department (Green and Wilson-Medhurst, 2009).

As these activities are scaled up to all undergraduate programmes across the faculty there is a need to consider not only how ALL will be developed but also how it can be measured and evaluated so as to promote discussion around quality teaching. Given the learning inhibitors and other challenges identified above, a bottom-up approach to quality enhancement was instituted within the framework of the overarching (top-down) concept of learning. This included setting up a Learning Teaching and Assessment (LTA) sub-group within EC at Coventry (Wilson-Medhurst, 2008) to provide a forum and a focus for deliberation around quality enhancement of teaching issues. This approach included engaging with the evidence emerging from ALL pilots within EC as well as similar activity elsewhere in the United Kingdom and overseas (Wilson-Medhurst *et al.*, 2008; Wilson-Medhurst and Glendinning, 2009).

## Towards a developmental measurement tool

Over time it became clear that the LTA sub-group needed to develop a common evaluation language. This needed to be meaningful within each of the disciplinary contexts within which ALL was being implemented and thence meaningful for evaluation within those contexts.

As outlined above, there was an attempt to assess the quality of teaching of the first programme level implementation of the ALL pedagogical experience (Green and Wilson-Medhurst, 2009). This involved using a questionnaire based on the Coventry University student satisfaction survey mentioned above plus student and staff focus groups (*idem*). While this evaluation identified some useful feedback, it became clear that an instrument better tailored to the ALL approach would also be useful, in particular in relation to the kind of active learning behaviours and roles that the ALL pedagogy requires for effective learning to take place. Having an appropriate evaluation instrument for learning and teaching behaviours is particularly important when one considers that, as recent research suggests, once students are on their programme of study it is the quality of the learning and teaching experience that has the most influence on student satisfaction (or otherwise) rather than other aspects such as the physical environment (Douglas *et al.,* 2006).

In developing such a tailored instrument, a suitable pilot approach was identified as soon as the LTA sub-group focused on the overarching objective of the ALL concept of learning, which is to promote student engagement. To this end it was important to identify what was meant by engaged learning and a report identifying indicators of engaged learning (Jones *et al.*, 1995) provided useful insights (see Annex A1). These indicators of engaged learning formed the basis for discussions around the derivation of an evaluation instrument for ALL. The LTA sub-group containing representatives from all departments discussed and agreed that EC would pilot a questionnaire based on these indicators of engaged learning. This piloting was to be conducted within a focus group setting.

Consistent with the ALL concept of learning, the objective at this stage was to design an evaluation instrument that could be used consensually by students and staff to:

- Encourage student reflection on their learning (Rowley, 2003).
- Allow students the opportunity to give teaching staff feedback on their learning experience to date and therefore give staff a "window" on that experience and the opportunity to respond.

This step constituted an attempt to "shorten" the feedback loop and to optimise localised problem-solving to allow learning from experimentation and feedback.

The survey questions that formed the evaluation instrument focused on ALL learning and teaching behaviours, attitudes and approaches: these constituted the "objects" of satisfaction (Aldemir and Gülcan, 2004). Students were asked to rate the extent to which they were satisfied with various aspects of their learning and teaching experience on their course, and then to rate

how important they were to their experience as a student. Thus, for example, where the Coventry University satisfaction survey prompted "Teaching staff treat you with appropriate respect" and "Class size appropriate to the activity", the ALL survey instead prompted "I can question my tutors" and "I work in small groups with persons from different backgrounds and experiences". The ALL survey questions are better aligned (Biggs, 1999) to the ALL concept of learning. Table 1 gives further examples of the different style of questions in the two types of survey.

Table 1. **Comparison of survey question "types"**

| Typical "standard" survey questions | ALL-aligned survey questions |
|---|---|
| Availability of staff for informal discussion. | I can question my tutors. |
| | I can debate concepts and ideas with my tutors. |
| How you are being taught. | I work in small groups with persons from different backgrounds and experiences. |
| Class size appropriate to the activity. | |
| Knowing what is expected of you as a student. | I try out new things. |
| | I teach others in informal contexts. |
| Range of topics covered in your syllabus. | The activities on my course relate to real world problems. |
| The course is intellectually stimulating. | My studies use and develop my different capabilities and strengths. |

The above ALL-aligned survey questions are intended to provide a common evaluation language in order to promote tutor-student and student-student communication around activity-led learning. These survey questions need to be "fit for developmental purpose" and to be used in conjunction with other feedback mechanisms to facilitate dialogue, as is consistent with the ALL concept of learning. This does not preclude the use of aligned top-down indicators to help benchmark change over time.

## An outline of the method and findings of the pilot

The questionnaire was piloted with two volunteer groups of first- and second-year undergraduate students drawn from different programmes of study; 17 students participated in all. The focus group sessions were facilitated by student advocates from the faculty's student experience enhancement unit (SEE-U). The questions relating to indicators of engaged learning were on the whole well understood by students, and provoked discussion around matters that were clearly important to them. The discussions revealed that activity-led learning was being implemented differently and to different degrees in different modules, programmes and departments. Different degrees of satisfaction were reported as a function of

these experiences. Key factors for satisfaction related to the teacher/facilitator role, learning activity design, as well as assessment design and alignment.

The aim of this pilot was to check students' understanding of questions and whether these questions were important to them. Having identified their relevance and where question refinements could usefully be made, the next step will be to put the refined questionnaire to a larger number of student groups in the 2009/10 academic session. The results of this survey will help evaluate first year undergraduate, first six-week ALL pilot implementations across the EC faculty. This in turn will inform the development of the ALL approach and identify new operational knowledge that will help staff and students to effectively utilise ALL within their disciplinary contexts. Ultimately this will nurture the development of context-sensitive performance indicators that are predicated on activity-led (rather than, say, didactic) models of teaching and learning. These indicators should enable staff, students and managers to enhance the quality of teaching and learning.

## The knowledge production process

The EC faculty case study illustrates the process by which context-sensitive evaluation elements can be identified to allow meaningful feedback for the purpose of creating new operational knowledge. This knowledge can then be applied and tested for on-going refinement and learning.

This process reflects James' five tentative principles (outlined above) for strengthening the adaptive capacity of universities, *i.e.* recognise that the department/centre is the key learning unit; consciously build feedback loops; establish clear, agreed and measurable objectives; encourage experimentation, tolerate error; create nodes for knowledge diffusion (James, 2001).

In the case under discussion the EC faculty is the key learning unit, where, as the OECD report recommends the evaluation of quality teaching is used as a vehicle of discussion, here within the guiding vision and principles of activity-led learning. One central element of this process is a consciously built feedback loop using aligned teaching quality indicators that are themselves constructed and refined through an action research (McNiff and Whitehead, 2006) process. Top-down data flow can generate the impetus for change but the response to generate new operational knowledge requires a bottom-up drive and strategy. This approach also acknowledges that sustainable change is one in which both staff and students are engaged to generate the new operational knowledge.

The knowledge production process articulated in this paper includes the following key features. It should:

- Have a clear statement of the vision and values that underpin the initiative.
- Provide a clear articulation of the concept of learning in terms of expected behaviours, attitudes and approaches (links to the underpinning vision and values).
- Allow time for the co-operative selection (*i.e.* involve staff and students locally) of teaching quality indicators that are meaningful within the context of learning. This can include aligned top-down indicators to help benchmark change over time.
- Use the aligned teaching quality instrument in conjunction with other appropriate sources of feedback to evaluate the "experiments".
- Use the teaching quality instrument itself developmentally; and ensure that the feedback is owned and utilised by key stakeholders but in particular teaching practitioners who are engaged with its development.
- Utilise (and have access to) supportive management and team-working structures including a staff forum for discussing the outputs that feed into other decision-making structures and discussion fora.
- Give a key role to lead facilitators (not simply "champions") at faculty, departmental and course level.

In short, to generate new knowledge aligned to the concept of learning the knowledge needs to be built in concert. In EC at Coventry this was initially achieved through ALL pilots which were co-ordinated through an LTA advisory group, and as a result of this an emergent Community of Practice (Wenger, 1998) of ALL researcher practitioners formed (Wilson-Medhurst, 2008). This work was carried out in tandem with developing student-facing systems and processes that are fit for purpose. This parallel initiative gave rise to the EC faculty's Student Experience Enhancement Unit (SEE-U) and student advocacy as described in Glendinning *et al.* (2008) and Wilson-Medhurst and Glendinning (2009). Student advocates acting as research "assistants" played an important role in the research process to test questions with volunteer students. The ALL innovation extends to planning and designing learning spaces that are fit for purpose. Some initial exploration of these aspects of the work at EC, plus others in relation to the change management approach being adopted, is explored in Wilson-Medhurst and Glendinning (2009).

## Linking to the EC faculty vision

This adaptive knowledge production process has a consciously built feedback loop that ultimately links back to the vision that underpins the activity-led learning innovation. The evaluation questions help to close the

feedback loop not only locally at the course and departmental level but also at the strategic or vision level. Table 2 illustrates how the ALL-aligned survey questions link back to the vision that underpins this initiative.

Table 2. **The EC vision and examples of related evaluation questions**

| Vision: to develop communities of learners engaged in employer- and profession-focused activity-led education | Example of type of question that relate to the EC vision |
|---|---|
| Communities of learners. | *e.g.* I feel part of a learning community where I learn from others. |
| Employer- and profession-focused. | *e.g.* The activities on my course relate to real-world problems. |
| Activity-led education. | *e.g.* I am presented with a range of activities that allow me to develop my capabilities in a variety of ways. |

The types of question above enable students to provide aligned feedback that can be acted upon by relevant stakeholders and teaching practitioners in particular. Such questions, as appropriate proxies for ALL teaching quality, can also be used to track changes over time, for benchmarking purposes for example. More meaningfully, perhaps, these questions provide both staff and students with the opportunity for self evaluation or self tracking against aligned performance or developmental indicators.

## Concluding remarks

A student satisfaction survey cannot be a sufficient proxy for teaching quality if questions asked do not fully relate to the teaching and learning behaviours, attitudes and approaches expected and required of both staff and students. Indeed it may promote learning and teaching practices that are not fully aligned to the concept of learning. This can potentially limit or undermine the development of context-sensitive operational knowledge around learning and teaching practices. It is therefore important to identify and develop evaluation instruments that are better informed by the concept of learning in which they must operate.

This paper presented a case study that demonstrates the processes through which such an evaluation instrument can be developed. This includes ensuring the elements or objects of evaluation are suitably aligned to the concept of learning. The instrument itself, if used developmentally in conjunction with other feedback, can promote sustainable improvements in teaching quality framed within this concept of learning. Another objective is to generate performance or developmental indicators which are better recognised and valued by those who need to respond to them at the operational level, and that are consistent with the overarching vision and values that underpin the innovation.

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# ANNEX A1

Table A1.1. **Indicators of engaged learning**

| Variable | Indicator of engaged learning | Indicator definition |
|---|---|---|
| Vision of learning | Responsibility for learning | Learner involved in setting goals, choosing tasks, developing assessments and standards for the tasks; has big picture of learning and next steps in mind. |
| | Strategic | Learner actively develops repertoire of thinking/learning strategies. |
| | Energised by learning | Learner is not dependent on reward from others; has a passion for learning. |
| | Collaboration | Learner develops new ideas and understanding in conversations and work with others. |
| Tasks | Authentic | Pertains to real world, may be addressed to personal interest. |
| | Challenging | Difficult enough to be interesting, but not totally frustrating, usually sustained. |
| | Multidisciplinary | Involves integrating disciplines to solve problems and address issues. |
| Assessment | Performance-based | Involving a performance or demonstration, usually for a real audience and useful purpose. |
| | Generative | Assessments have meaning for learner; maybe produce information, product, service. |
| | Seamless and on-going | Assessment is part of instruction and *vice versa*; students learn during assessment. |
| | Equitable | Assessment is culture fair. |
| Instructional model | Interactive | Teacher or technology programme responsive to students' needs, requests (*e.g.* menu driven). |
| | Generative | Instruction oriented to constructing meaning; providing meaningful activities/experiences. |
| Learning context | Collaborative | Instruction conceptualises students as part of learning community; activities are collaborative. |
| | Knowledge-building | Learning experiences set up to bring multiple perspectives to solve problems such that each perspective contributes to shared understanding for all; goes beyond brainstorming. |
| | Empathetic | Learning environment and experiences set up for valuing diversity, multiple perspectives, strengths. |
| Grouping | Heterogeneous | Small groups with persons from different ability levels and backgrounds. |
| | Equitable | Small groups organised so that over time all students have challenging learning tasks/experiences. |
| | Flexible | Different groups organised for different instructional purposes so each person is a member of different groups; works with different people. |

Table A1.1. **Indicators of engaged learning** *(cont.)*

| Variable | Indicator of engaged learning | Indicator definition |
|---|---|---|
| Teacher roles | Facilitator | Engages in negotiation, stimulates and monitors discussion and project work but does not control. |
| | Guide | Helps students to construct their own meaning by modelling, mediating, explaining when needed, redirecting focus, providing options. |
| | Co-learner; co-investigator | Teacher considers self as learner; willing to take risks to explore areas outside their expertise; collaborates with other teachers and practicing professionals. |
| Student roles | Explorer | Students have opportunities to explore new ideas/tools; push the envelope in ideas and research. |
| | Cognitive apprentice | Learning is situated in relationship with mentor who coaches students to develop ideas and skills that simulate the role of practicing professionals (*i.e.* engage in real research). |
| | Teacher | Students encouraged to teach others in formal and informal contexts. |
| | Producer | Students develop products of real use to themselves and others. |

*Source:* Jones, B.F. *et al.* (1995).

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