Mind the gap

IOSH research workshop

summary paper
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Acknowledgements

IOSH would like to thank the workshop speakers – Dr Peter Claffey, Hazel Harvey, Dr Luise Vassie and Lawrence Waterman – and all those who attended this event. Their valuable contributions were greatly appreciated. Thanks are also extended to Cardiff University, who provided the facilities, in particular Professor David Walters and Deborah Watkins, who helped organise the event. We are also grateful to Becky Allen, who acted as rapporteur for the event and helped draft and produce this paper.
Introduction

IOSH held its first Occupational Safety and Health (OSH) Research Workshop at Cardiff University on 28–29 June 2004: ‘Competence – how can we evaluate what is needed to achieve the goals of the Framework Directive’. This paper describes the event and outlines the main discussion points that emerged.

In order to help establish an evidence base for OSH policy and practice, the IOSH Research and Development Sub-committee (R&DSc) and Technical Affairs department organised an interactive workshop to identify knowledge gaps in the area of OSH competence linked to the EU Framework Directive (89/391/EEC). Three speakers invited discussion on individual, organisational and EU competence issues from around 40 delegates, including six from outside the UK. Delegates represented a cross-section of policy-makers, researchers, practitioners and agencies (see Appendix for list of delegates). The outcome of the event will help to inform a list of directed research topics for possible IOSH research grants.

This pioneering Cardiff event was opened by Lawrence Waterman, President Elect of IOSH, explaining that it had been initiated to further IOSH’s mission, as a chartered professional body, charity and learned society, in promoting and developing excellence in OSH. In addition to the provision of training and guidance for both practitioners and non-practitioners, IOSH is actively seeking to help the development of evidence-based OSH practice in its widest sense. An important part of our outward-looking focus has been the establishment of the IOSH Research and Development Fund, set up in 2003 to fund research designed to foster both professional practice and wider acceptance of OSH ideas. Competence is an IOSH priority area for research funding, and hence was chosen as the subject for this first Research Workshop.

Two possible approaches to competence were outlined: the first, ‘more people like us’, doing the same sort of work that practitioners have traditionally done; and the second, more outward-looking and outcome-driven, identifying the range of skills required by practitioners in today’s world of work, in order to positively influence other stakeholders, including workers, managers and politicians, as well as the OSH skill-base required by these groups.

As well as a challenge to researchers, this also represents a challenge to OSH professionals – we need to determine what we know, as well as what we don’t know but would be useful to explore.
Research workshop sessions

The workshop was divided into three sessions, each of which debated an area of competence:
- individual competence
- organisational competence
- the EU view on competence.

Invited speakers gave an opening presentation to the sessions. The presentations were followed by discussion in three syndicate groups, which then fed back key points to the whole workshop. The key points were then drawn from each feedback session in order to provide inputs to identify those knowledge gaps requiring quality research.

Individual competence

Background
The first discussion, ‘The evaluation of an individual’s OSH competence and influence and potential areas for research’, was presented by Hazel Harvey, Head of Professional Affairs at IOSH.

The presentation opened with definitions of competence, including one taken from Article 7 of the Framework Directive:
- an employer shall designate one or more workers to carry out activities related to the protection and prevention of occupational risks
- designated workers must have the necessary capabilities and means
- external services or persons consulted must have the necessary aptitudes and the necessary personal and professional means
- designated workers and the external services/persons consulted must be sufficient in number.

The Management of Health and Safety at Work Regulations 1992 introduced an explicit requirement for a ‘competent person’ to assist employers with health and safety matters. In the 1999 revision of the document, regulation 7 states: ‘Every employer shall appoint one or more competent persons to assist him in undertaking the measures he needs to take to comply with the requirements and prohibitions imposed upon him by or under the relevant statutory provisions.’

The guidance supporting the Regulations and approved code of practice refers to the Qualifications and Curriculum Authority framework, which describes competence as: ‘The ability to perform to the standards required in employment across a wide range of circumstances and to meet changing demands.’

In case law, Gibson v Skibs A/S Marina and Orkla Grobe A/B and Smith Coggins Ltd 1966 defines a competent person as: ‘One who is a practical and reasonable man who knows what to look for and how to recognise it when he sees it.’

Knowledge, skills and experience

Competence results from the overlap of three attributes: knowledge, skills and experience.

Knowledge needs to be current, relevant and specific, and may be gained via formal education, training or on-the-job learning.

Skills are developed and honed through practical application, and certain core skills are common to both low- and high-risk environments. However, we should explore whether total skill-set requirements are specific to the needs of the particular industry.

Experience also needs to be current, relevant and specific, and is acquired over time – but how is its quality and adequacy assessed, and does it need to be sector specific?

Current (2002) national competence standards for safety practitioners are generic and based on a safety management system. Standards cover five main topics:
- policy and culture
- communication
- risk assessment and management
- monitoring
- audit and review.

Similar standards, albeit simplified, exist for health and safety representatives and managers.

Key questions on individual competence, therefore, include:
- should competence levels vary according to the industry concerned?
- do businesses need competence matrices?
- how transferable are skills and experience across sectors?
- what evidence exists that competent advice leads to improved OSH?
- does current education and training

‘Competence results from the overlap of three attributes: knowledge, skills and experience’
provide advisers with the necessary skills?
• how should competence be updated and developed?
• who should verify competence?

Discussion
During the discussion that followed, delegates expressed the view that OSH practitioners make less impact in businesses that lack good OSH leadership, management and a competent workforce. An important element of competence, therefore, was felt to be the ability of OSH practitioners to act as agents of change in the workplace. It was suggested that OSH practitioners/managers may have something to learn in this respect from workers’ representatives, whose competence often includes communication skills and experience gained from regular negotiation with management and colleagues. The question ‘How effective is competence in the absence of influence?’ was also raised.

There was discussion regarding the UK implementation of the Framework Directive, which explicitly refers to participation/worker involvement, with Dutch and Swedish delegates suggesting that, compared with other countries, UK qualifications and competencies were very structured.

The changing nature of work hazards, including the impact of new technologies and the increasing prominence of mental health issues, should also be considered with respect to competence, posing the question: ‘Do we have a model of competence established to deal with yesterday’s, rather than today’s, OSH problems?’

A view emerged that OSH practitioners are often reluctant to become involved in what they regard as ‘office politics’. As a result, they are less able to exert influence in the design of new processes and equipment. It was felt that there is a need for the development of educational resources to make OSH practitioners reflect more on their practice.

Other key issues raised were:
• how can OSH professionals become involved at the beginning of the design stage? – case histories would be useful here
• what skills do OSH professionals need to become effective change agents?

The question of how an OSH practitioner’s influence is affected by organisational culture also emerged. It was felt that a study of practitioners’ skills might be useful, spanning their technical, business/management and public/customer OSH expertise.

Summary
• What are businesses’ (especially SMEs’) needs with respect to competence?
• Do competent practitioners make a difference to effective risk management?
• Is research needed on practitioners’ ‘softer’ skills, such as communicating and influencing, so that effective strategies for bringing about change can be identified?
• What are the core competencies for managers as well as OSH practitioners?
• Is the UK implementing the Framework Directive with respect to competence?
• Is there enough health in OSH practice?

Organisational competence

Background
‘Assessing the value of competence in organisations and potential areas for research’ was the subject of the second discussion, presented by Dr Luise Vassie, Lecturer in Health and Safety Management at the University of Leicester.

Increasing competitive demands on businesses have resulted in new ways of working and greater emphasis on competence throughout the workforce. Human capital is increasingly recognised as the key to growth and competitiveness. Several studies have looked at the impact of competence on organisational performance. For example, Winterton and Winterton explored the benefits of competence-based management development; the European Observatory has addressed competence development in SMEs; and CEDEFOP has reported on a comparative analysis of competence development in multinationals in the EU member states. However, Dr Vassie cautioned that with all studies limitations of study design, such as confounding variables, needed to be borne in mind in considering the strength of the evidence gathered.

In turning to consider OSH competence, a number of factors that influenced organisational OSH competence were outlined, including: legislation, corporate culture, hazards, stakeholders, workers and

‘Do we have a model of competence established to deal with yesterday’s, rather than today’s, OSH problems?’

‘Human capital is increasingly recognised as the key to growth and competitiveness’
managers, as well as OSH practitioners. Dr Vassie highlighted the need for the relationship between these factors and organisational OSH competence to be examined.

According to Hale, it is unclear whether firms that are good safety performers employ safety practitioners, or whether safety practitioners make their employers good at safety. There is a paucity of evidence on this issue. While economic conditions have been overridden by a steady rise in the number of employment opportunities in the OSH field, the impact of this rise on OSH performance has not been quantified.

Wright et al. found that large firms are more responsive to OSH advice and intervention, partly because of the presence of in-house OSH professionals, but also because of more clearly defined roles within the organisational structure. Assuming this to be true, Dr Vassie questioned whether it was the in-house expertise or the organisational structure that is the key, and whether this can be modelled?

The HSE’s ‘Worker safety advisors’ pilot was outlined as a small study into the possible benefits of introducing temporary competent worker safety advisors into SMEs. The study found that the majority of employers involved in the pilot reported improvements in OSH management, including introducing or updating OSH policies, setting up OSH committees, and undertaking risk assessments. Over half of them felt that improvements were as a result of the intervention of worker safety advisors. However, the limitations of ‘before and after’ studies should be borne in mind.

Examining the OSH professional’s contribution to OSH performance, Dr Vassie raised the issue of how individual OSH competence leads to organisational OSH competence, given that individual competence has been considered as a necessary but not sufficient input for organisational competence, and that organisational competence requires a transfer mechanism allowing interchange between individuals and organisational structures. In addition, Dr Vassie introduced the distinction between capability (effective and appropriate application of a combination of knowledge, skills and personal qualities in a range of situations, both familiar and unfamiliar) and competence.

Finally, some issues associated with assessing the cost–benefit of OSH professionals, both to organisations and the national economy, were briefly presented. Manuele suggested that OSH professionals should be able to explain their cost–benefit to their employer.

Other key questions
- How do we measure whether and to what extent organisations that employ competent OSH professionals perform better?
- Is there an optimum number of OSH advisers?
- How do we measure whether and to what extent the UK economy benefits in relation to the numbers of competent OSH advisers?
- How do we address the confounding factors?

Discussion
During exploration of organisational competence issues, the input–output model acted, as intended, as a useful focal point for discussion. Some concern was expressed about treating the transfer process from individual to organisational competence as a simple input–output model. It was felt that this was based on unproven assumptions about cause and effect, conflated individual and organisational competencies, and that a more systematic approach was required.

Although there is a need to look at firms that perform well against those that do not, before deciding if OSH professionals affect OSH performance, ‘OSH performance’ needs to be debated and defined. For example, performance is not merely the absence of harm as measured by lost-time injury frequency. Questions were raised about the evidence behind the HSE’s ‘good health is good business’ mantra, and the group felt that a critical review of current concepts of performance would be a useful starting place.

In a ‘perfect world’, OSH practitioners would gradually work themselves out of jobs as workers and management became sufficiently competent and resourced in OSH. Echoing discussion on individual competence, key questions are, therefore, how do managers become competent in OSH, and what makes senior management interested in the issue?

It was felt there is a need for more effective sharing and signposting of OSH

How do we measure whether and to what extent organisations that employ competent OSH professionals perform better?
advice and that intermediaries such as trade associations and accountants could be effective conduits for information. It was thought that research on knowledge transfer would be useful case studies to test whether the input–output model works and, if it does, how it could be expanded. A review of the different roles of players in the OSH infrastructure would also be useful and brief mention was made of whether workplace OSH would benefit from a high-profile, campaigning-style organisation.

The ‘safety representative effect’ has been well studied, but there are many other organisational issues that it would be useful to review, including:

- the role/impact of subcontractors
- the impact of passport schemes
- the impact of contracting-out OSH services
- knowledge transfer between organisations
- case studies of OSH improvements
- what ‘switches managers onto’ OSH?

It was emphasised that lessons can be learned from other EU member states on the above issues.

Summary

- Thorough literature reviews are needed before research is undertaken.
- Although there is work in progress, there is still a lack of clarity about exactly what is being measured when OSH performance is discussed.
- There is a need for ongoing review of the efficacy of current performance indices, such as CHaSPI, in predicting future performance.
- Quantitative studies should not be the only focus, as qualitative research and case studies can also be useful, particularly those illustrating what works well in various organisational structures, including – but not limited to – the role of the OSH professional.
- A better understanding of knowledge transfer mechanisms could be beneficial.

EU view on competence

Background

‘The EU Framework Directive requirement for competence and potential areas for research’ was the subject of the third and final discussion, presented by Dr Peter Claffey, Deputy Chief Inspector of the Health and Safety Authority, Republic of Ireland.

The session opened with a review of the legislative background on competence, outlining the level of implementation of Article 7 of the Framework Directive in various member states.

- Belgium: employers must use either an in-house or external OSH service, the latter being certified by the Labour Ministry. OSH services are required to include medical, nursing, safety, ergonomic and psychological expertise, but competence is not defined.
- Finland: Labour inspectors check the OSH competence in high-risk industries such as construction and mining.
- Germany: German law on the Directive requires that workers must be capable of performing tasks assigned to them with regard to the protection of OSH, and that the employer may give reliable and skilled persons the tasks, in writing, to perform any obligations. A separate statute describes duties of occupational physicians, safety engineers and other safety specialists.
- Netherlands: both in-house and external OSH services exist – these bodies are certified by the National Certifying Institution, under the Arbo Dietsen system.
- Republic of Ireland: Regulation 8 of the 2003 General Application Regulations on Protective and Preventative Services states: ‘...a person shall be deemed to be competent where, having regard to the task he or she is required to perform, and taking account of the size or hazards (or either of them) of the undertaking or establishment in which he or she undertakes work, he or she possesses sufficient training, experience and knowledge appropriate to the nature of the work to be undertaken.’
- Sweden: OSH services used to be state subsidised – now employers get tax rebates if they use OSH services. A range of expertise is provided by OSH service organisations (as in Belgium), certification bodies are involved, but competence is not defined.

‘...there is still a lack of clarity about exactly what is being measured when OSH performance is discussed’
• awareness of competence limitations, eg when to call in an expert.

As well as these, the following were suggested as possible areas of research:
• national registers of competent persons
• specification of basic qualifications and certification schemes
• the benefits of a more prescriptive, as opposed to a market-driven, system
• how best to measure and assess competence.

Discussion
Discussion began with a comment that ‘...to learn from the Framework Directive’s implementation in other member states, we must get our facts straight and avoid making assumptions’. Most member states, for example, do not have generalist OSH specialists, but use individual specialists who collectively provide integrated services. Although legislation across the EU is well documented, its implementation is not. Discussion returned to the role of the specialist as facilitator – acting to improve the competence of workers and managers – and the question was raised as to who should be assessing competence. It was felt that although there is a wealth of research on OSH competence, very little of this is in English. There is an opportunity, therefore, for UK professional and research bodies, such as IOSH, to become involved in facilitating translation.

There was debate concerning globalisation and migrant labour and the impact of multinational firms on OSH performance, and whether or not there should be pan-European standards for OSH professionals. Recent ENSHPO research results demonstrating the diversity of the UK OSH practitioner’s role were briefly discussed and whether this role should be narrowed. Also considered was whether gap analysis of the wide range of organisations providing OSH advice/information services would help businesses to find out what is available and how to obtain it.

Further discussion centred on the state of knowledge about OSH service provision within the EU and its potential relevance to the UK. Although it was acknowledged that large pan-European studies are beyond the scope of available funding, when commissioning research, it was felt that consideration should be given to using questionnaires designed for use in more than one member state.

Summary
• In view of the potential EU market for practitioners, it would be prudent to explore what might be learned from other professionals (eg occupational physicians) and groups (eg EurEng) about defining and developing standards, criteria and certification models.
• Examining OSH service provision in the EU, a complex picture reflecting many factors, not least the presence of both market-driven and state services, could be very influential, if costly. One way forward could be to look at individual topics, such as occupational road risk or the impact of outsourcing OSH services.
• In evaluating training within the UK, there are national standards (ENTO) against which training may be evaluated, and IOSH has developed a number of accredited courses. A recognised and accepted European-wide training evaluation methodology and set of standards does not currently exist, and what would be required to establish this could be explored.
• Taking account of the volume of research not published in English, IOSH could play a role in facilitating translation and dissemination of previously localised knowledge or in commissioning review articles based on translations.

‘...to learn from the Framework Directive’s implementation in other member states, we must get our facts straight and avoid making assumptions’
Priorities

Based on the day's discussion, the workshop ended by emphasising that all IOSH research should be predicated on a thorough literature review, and went on to identify a number of areas that could possibly benefit from research:

- specific OSH literature reviews, where these have not been undertaken before
- the content of an IOSH guide for businesses on assessing OSH needs
- effective and sustainable interventions for SMEs that address their needs
- case studies of OSH best practice
- identifying core OSH competencies
- assessing the competence of OSH professionals
- examining 'outstanding' OSH professionals to understand whether they have any determining attributes, what these are and whether they can be acquired by others
- studying/systematically reviewing knowledge transfer mechanisms
- measurement of OSH performance
- examining several 'good' organisations and assessing the OSH competence within their organisational structures
- how to build on the corporate social responsibility agenda
- how to include OSH in MBAs and other management courses.
Conclusions

The R&DSc discussed the outcome from the Research Workshop and felt that the overriding topic was the measurement and evaluation of OSH performance. Consequently, it put forward the following brief for research:

‘Studies into the effect on measured OSH performance from the use of competent OSH advice by employing organisations. The following aspects to be of particular interest:

• relations between/relative contributions of corporate culture and competent OSH advice
• inter- and/or intra-sector comparisons
• the effect of competent OSH advice on changing styles of organisational structure or employment practices and vice versa.’

Such research will include/be preceded by a literature review of published evidence.

References

# Appendix

## List of delegates

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## Event support

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