

Wrapper Modules: A reusable curriculum approach to recognise and enhance learning in the workplace.

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Introduction

In 2008 Harper Adams University College together with the Royal Agricultural College received Higher Education Funding Council for England support to lead the development of work-based learning provision across the rural sector. The project, known as REEDNet (Rural Employer Engagement Network), set out to expand accredited provision by 450 full time equivalent employer co-funded student places over the three year life of the project. Both lead institutions undertook development of their infrastructure to support the increased employer engagement activity; for example by setting up appropriate validation processes, establishing a joint-working culture and developing a financial model for this activity (for a full explanation of REEDNet see Arnold, Warr and Newlyn, 2010). A further, ongoing challenge to enable the growth of employer responsive provision lies in the creation of appropriate and robust curricula. This paper outlines one specific approach that has been designed and used as a means of providing an agile and responsive curriculum to support employer engagement, particularly for employers who have some existing internal provision which is significant but which may not in itself meet the standards required for validation within higher education.

The curriculum challenge

Through Harper Adams' engagement with the rural business community it became clear that there was, and is, a vast amount of high quality training and effective learning already in place across the rural sector, as is also known to be the case in other sectors. Where high quality training is already in-place the Higher Education Institution's employer engagement focuses upon recognising, extending and enhancing provision. There are a number of ways in which existing training can be enhanced, for example through the addition of more technical or industry specific learning or by the inclusion of appropriate theoretical engagement.

The challenge of enhancing and accrediting provision has, in REEDNet's experience so far, been characterised by three additional factors.

1. The challenge of scale

Provision is often required for a small numbers of students (in absolute terms or in full time equivalent value). Individual engagements have needed to be designed to be viable for the small student numbers offered up by individual organisations. The small numbers are in part the result of the large number of micro businesses as well as small and medium sized enterprises (SME's) in the rural economy, but also are the result of demand for focussed training from within larger organisations e.g. focused upon a small specialist group of staff.

The challenge of scale is not unique to the experience of REEDNet. A number of recent HEFCE funded projects are specifically targeted at working with SME's: The University of Bedfordshire is actively

seeking to find ways of opening up employer engagement to SME's in five specific sectors (ICT, Media and Creative industries, Financial and Business Services, Tourism, Leisure & Heritage and Manufacturing and advanced engineering) through the development of a subscription based 'knowledge club'; The University of the Arts hosts a project to engage SME's within the creative industries in the design and delivery of higher education; and The KUBIS project has been set up at Kingston university to develop work-based learning opportunities for employees in the manufacturing sector through the engagement of SME's.

2. The challenge of timing

The market requires a swift response to meet its needs. Waiting for extended periods for developments to come to fruition is not desirable for the business, the learner or the higher education institution. Clearly, for all parties, compromise in academic quality is an unacceptable price for rapidity. The QAA's Employer Responsive Provision Survey (2010) makes clear that a pressure to respond quickly to employer needs has been felt by numerous higher education institutions.

3. The challenge of diversity.

The diversity of employers, roles and of learning needs 'out there' means that aligning expertise within the higher education institution with the needs of industry is an ongoing challenge, especially in the face of rapidly changing commercial contexts (Bolden et al. 2010).

An approach: Introducing wrapper modules

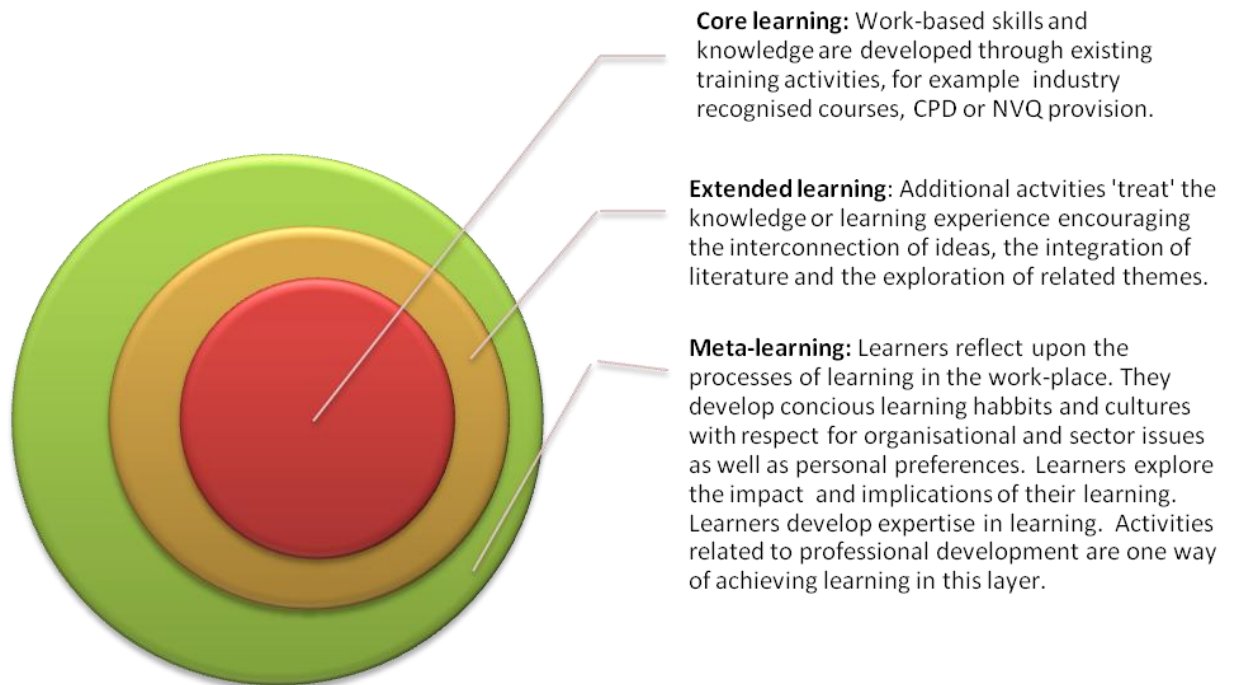
Harper Adams' REEDNet team, with CETL support¹, set about forming curriculum responses to serve the accreditation and enhancement of existing provision in the face of the challenges outlined. One output from this process has been the, internally named, wrapper module.

Wrapper modules recognise existing training as a vehicle for further learning. Further learning occurs through a range of processes that include connecting the development of knowledge or competencies (from the existing training) to bodies of literature, exploring related current sector issues and analysing the impact of new knowledge upon practice and organisational improvement.

Wrapper modules essentially stimulate further learning which is related to existing training; essentially further learning is designed to grow from existing training and to feed back into it. The layers of the wrapper module are depicted in Figure 1.

¹ *Aspire* Centre for Excellence in Teaching & Learning.

Figure 1: The layers within a wrapper module.



A critical assumption underpinning the wrapper module concept

There is an assumption implicit within the wrapper module that expertise in the workplace or within professional bodies is best placed to teach, facilitate and assess the development of very specific aspects of work-based learning. The delivery and assessment of the core learning is then, under this model, devolved to work-based experts. The role of the higher education institution in this arrangement is therefore to facilitate extended learning (as described in Figure 1) and meta-learning.

Assessing the learning occurring within wrapper modules

To assess wrapper modules judgments need to be made by or on behalf of the higher education institution, as to whether a learner has satisfactorily demonstrated the knowledge, skills and understanding associated with the extended- and meta- levels as outlined by the module's learning outcomes. Assessment of core learning remains with the work place the professional body or other vocational awarding body.

This generates a number of potential assessment scenarios (outlined in Figure 2).

Figure 2 Wrapper module assessment scenarios

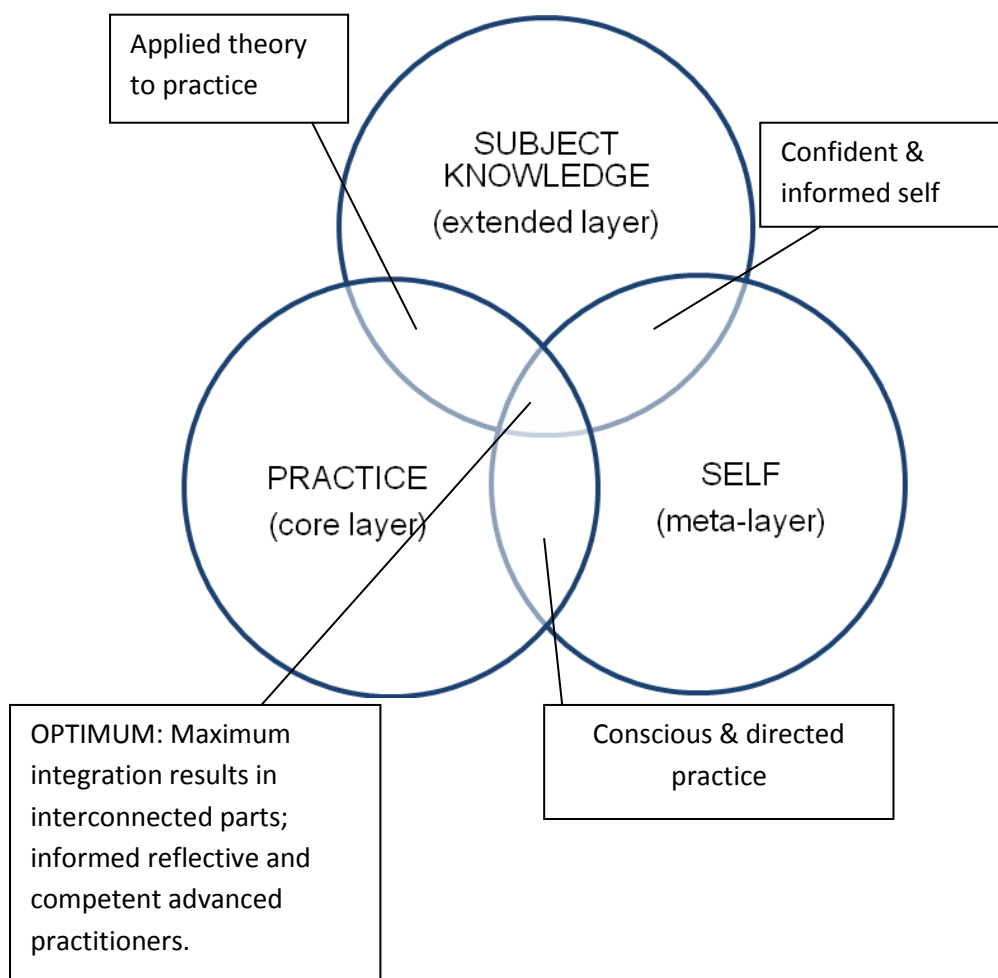
Scenario a: Assessment of the different layers happens discretely Each layer is assessed through different a number of products e.g. observation (core), report (extended) and PDP with a reflective commentary (meta).
Scenario b: Assessment of the different layers is delivered through a linked approach. The employer, professional body or examination board assesses the core element. The information within this assessment is used as supporting material for the HE element. For example an NVQ portfolio is used as an appendix to a higher education commentary and is cross-referred to add illustrations and context for the higher education element.
Scenario c: Assessment of the different layers is delivered through an integrated approach. One assessment product is used but is assessed in two different ways. The employer, professional body or examination board assesses the core elements whilst the higher education assessor considers the extended- and meta-layers of learning.

Theoretical underpinnings

The wrapper model concept was a pragmatic response to a real challenge. Kerwin *et al.* (2009) suggested that the higher education sector can't compete with private providers and must therefore innovate and play to its strengths. The wrapper module concept enables higher education institutions to take the role of 'experts in learning' and leaves industrial experts to underpin operational and vocational skills. The wrapper module concept enables both industry and the higher education institution to operate through their respective strengths. The division of roles and responsibilities of the partners can be clearly established inline with expertise. Higher education institutions are responsible for extended and meta-learning and are then not responsible for, or directly dependent upon, quality assurance of the core element. Learning outcomes for wrapper modules are designed such that that no claim is made for the achievement of specific technical competences or vocational aspects; claims are made regarding the learner's ability to, for example, connect ideas, synthesise, critically evaluate, analyse and to illustrate concepts.

Lyons & Buckley (2009) adapt Barnett & Coates' (2005) conceptualisation of the professional curriculum and identify three domains of learning in the context of work; the 'practice' domain, 'subject knowledge' domain and the 'self' domain. Completeness, it is suggested, comes from addressing all three domains. The three layers of the wrapper module can be seen to correspond to these domains. The maximisation of overlap of the layers would, it is proposed, depend upon the level of integration of the layers within both the assessment strategy and within the learning and teaching strategy used in delivery. Figure 3 transposes the wrapper module concept on to Lyons & Buckley's model of curriculum; the perceived benefits of the student experience for each possibility are annotated.

Figure 3 The domains of curriculum associated with wrapper modules (adapted from Lyons & Buckley, 2009).



Meta-learning, according to Biggs (1985), is a learner's awareness of their own learning which in-turn facilitates their taking control of the learning process. Meta-learning is useful to enable and empower learners to learn, which is particularly important against the backdrop of a rapidly changing knowledge economy (Arnold & Thompson, 2009). In order to promote meta-learning, the wrapper module would most likely draw upon elements of personal and professional development planning. Such activities act as a mechanism to support an enhanced awareness of self, professional needs, professional context and learning consciousness. Activities may comprise: designing and undertaking skills audits, analysing learning preferences, assessing sector skills needs, assessing organisational needs, critically experiencing and analysing a range of learning experiences, maintaining a learning journal and systematically reflecting upon a learning experiences.

The value of using personal and professional development planning as a mechanism to promote meta-learning has an added value; the consideration of learning approaches can generate improvements in personal strategies for core learning, which can be immediately put into action.

Wrapper modules also borrow from the domain of inquiry based learning. To extend the learning undertaken in the core element learners may undertake investigative activities. For example they might:

- systematically evaluate the impact of their new knowledge upon practice;
- identify and research current issues in legislation, technological change or consumer trends, to which their core learning relates;
- critically compare their practice with other examples of 'best practice' as uncovered through engagement with a professional community and through literature;
- undertake an action research project based on new techniques revealed to them in the core learning element.

The facility for employers and learners to select the exact themes of inquiry ensures that learning is current, relevant and authentic.

Case study of wrapper modules in action: An NVQ core

In 2009 a private training provider sought to develop a higher education award (Certificate of Higher Education) based around existing leadership and management training being delivered to learners at level 4 through an NVQ. Whilst the level was undoubtedly at level 4 the breadth of knowledge, skills and understanding within the existing provision was not deemed sufficient to meet the award outcomes for the proposed certificate.

As an added dimension to this scenario, the higher education institution did not have in-house direct match expertise to reflect the setting in which the individuals were working (care sector) although the university college did have generic leadership and management expertise.

Development work was undertaken to form provision that included the level 4 NVQ learning but which extended this through additional activities and which did take the institution outside of their own zone of expertise (i.e. in assessing care based students).

The wrapper module concept was applied such that the accredited learning experience (and associated outcomes) sought to:

- promote engagement with professional information sources;
- to deepen and extend the learning generated from the core learning activity;
- facilitate professional awareness, career planning and learning evaluation.

Some learning outcomes for the modules from this case study are illustrated in Figure 4.

Figure 4 – Examples of learning outcomes from the wrapper modules cited in this case

By the end of these modules learners must be able to:

1. Evaluate their existing skills against the requirements of their job role and identify workplace competencies for development.
2. Illustrate and describe the achievement of a range of relevant workplace competencies.
3. Describe the value of their acquired competencies to their organisation.
4. Identify improvements to their personal professional practice resulting from the development of new knowledge.
5. Relate specific examples of their learning gains to current sector issues.
6. Discuss their engagement with a range of professional information sources.
7. Compare a work-place experience to current and relevant professional literature.
8. Produce or update their personal development plan.

Within this collation of learning outcomes the opportunity to illustrate work-place learning is undoubtedly extensive. Yet the assessment (projected by the learning outcomes) is not focused on the content of that very specific workplace knowledge and understanding, for that is assessed by other means, in this case, via an NVQ. Assessment. For the higher education institution's purposes, the focus rather is upon the presence of information skills, the connection of learning to literature, the inter-connection of ideas and the development of learning awareness. Assessment of the higher level element can be seen to focus upon the extended learning and the development of meta-learning and extended-learning(refer to Figure 1).

In terms of quality assurance, the higher education institution remains satisfied that skills being developed at work, for work are being scrutinised by existing systems, organisations and communities of practice. The higher education institution retains a clear remit to assess and quality assure the learning occurring via the additional learning experiences, as is articulated through the 'wrapper' learning outcomes. This division of responsibility is reflected in award name (Certificate in Higher Education in Professional Studies). Award names for this form of learning need to reflect that which has been assessed, perhaps with some contextual descriptors (as a suffix).

Possible uses

The wrapper module concept is flexible in that it can be used to recognize and extend a range of training and learning at any academic level. Wrappers can be used to recognise and extend the learning associated with:

- In-house training
- NVQ's or other existing vocational qualifications.

- Experiential learning.
- Awards made by professional bodies.

A single wrapper module may be used in a variety of situations; the core learning would be variable, the themes and issues addressed would be variable but the learning processes and level would be fixed.

Advantages

The wrapper module concept offers a swift, yet robust, response to employer requirements; because learning is articulated in generic terms within the module documentation one wrapper module can be transferred to multiple situations. These modules have 'shell' characteristics. The modules are essentially reusable objects, as are resources and assessment approaches. Once the principles are accepted the modules are easily adaptable in terms of credit volume and level.

The focus of the higher education institution upon the extended learning and the meta-learning means that the need to use university staff with a tight expertise fit to each and every employer's need is redefined: whilst some expertise in the related field is required to make sense of the material presented, the institution assumes the role of assessing learning processes and levels; responsibility for the highly specific work-based learning is delegated to the experts in the field. The distribution of expertise in this way enables higher education institution to engage with a more diverse spectrum of employers, professional bodies and private training providers. The devolution of core learning to the workplace, coupled with the facility for employers and learners to select issues for consideration within the extended layer of the module, enables learning to remain up to date.

For learners and employers, knowledge and skills can be further developed in a way that respects the expertise in existence within the workplace and corresponding communities of practice. The higher education institution facilitates further learning without prescribing the curriculum. In addition the use of wrapper modules enables learning to keep pace with industrial, technological, legal or political changes enabling content at the point of learning to be adapted in the face of changes.

Conclusion

The wrapper module concept is a re-usable curriculum tool which enables flexible content, high degrees of relevance for employers and learners and which places the higher education institution in the position of being a 'guide by the side' facilitator of work-based learning rather than as a 'sage on the stage' style content provider. The wrapper module design facilitates the formation of trans-disciplinary, relevant, co-created knowledge that is both fit for practice and academically robust.

References

Arnold and Thompson, K. 2009. *Learning to Learn through real world inquiry in the virtual paradigm*. Pp. 6-33 in NEXUS Journal of Learning and Teaching Research. Volume 1. Available online at <http://www.edgehill.ac.uk/tld/journal/> [last accessed 28/4/2010].

Arnold, L. Warr, L. and Newlyn, J. 2010. *The Rural Employer Engagement Development Network: Lessons learned from the first year of the project*. Paper presented to UVAC Conference 2009 at The Royal York Hotel, York, 5/11/2009.

Bolden, R., Hirsh, W., Connor, H., Petrov, G., Duquemin, A. 2010. Strategies for effective HE – employer engagement. A South West Higher Level Skills Pathfinder Research Report. Available online at <http://www.cihe.co.uk/strategies-for-effective-he-employer-engagement/> [last accessed 25/5/2010].

Biggs, J. 1985. *The role of meta-learning in study processes*. British Journal of Educational Psychology. 55 pp. 185-212.

Kerwin, J., Bowles, L and Hughes, T. 2009. *Beyond Known Unknowns: A Further Exploration of the Demand for Higher Level Skills from Businesses*. Leicester, CFE.

Lyons, F & Buckley, C. 2009. *The Foundation Direct way to Personal Development Planning* in Personal Development Planning (Ed.) Strivens, J. Lichfield, FDF.

QAA. 2010. *Employer-responsive provision survey. A reflective report*. Gloucester, QAA.