Students as researchers, students as authors: strategies for engaging students in research and dissemination

Prof. Helen Walkington

with a student perspective from
Alex Hamilton
Outline

Students as Researchers
  – Nexus and partnership frameworks
  – Effective practices

Students as Authors
  – Research dissemination, within and beyond the curriculum
  – Journals, conferences, and more

Institutionalisation – what works?
Theoretical framework

Undergraduate research - high impact educational practice (Kuh 2008)

Research is for all students (Walkington & Jenkins, 2008)

Students ‘co-construct’ knowledge via dialogue with each other and their teacher as part of an academic ‘community of practice’. (Vygotsky, 1978; Lave & Wenger, 1998)

UK literature – Students as researchers?

- Consumers (Molesworth et. al., 2010)
- Clients (Bailey, 2000)
- Producers (Neary & Winn, 2009)
- Co-producers (McCulloch, 2009)
- Partners (Healey, Flint & Harrington, 2014)
- Change agents (Dunne & Hutchinson, 2010)
Healey, Flint & Harrington, 2014. Framework for partnership in learning and teaching
The research - teaching nexus
based on Healey 2005; Levy & Petrulis 2011

**Research tutored:**
“exploring others’ ideas”

**Research led:**
“gathering information”

**Research based:**
“making discoveries”
“free”
“real research”

**Research oriented:**
“evidencing and developing my own ideas”
Navigating the research landscape

Student initiated, consulting university staff – potential for student to become ‘expert’ (e.g. dissertation)

Staff initiated research, decisions shared with students

Students are informed and consulted

Students are given research problems – guided research
8 International strategies
to strengthen the research – teaching nexus

1. Interview researchers (guest lecturers, academics, email authors)
2. Scaffold research design (support the process of framing enquiry)
3. Scaffold the reading process (journal clubs)
4. Scaffold the writing process (inheritance)
5. Student centred active learning (PBL, simulations, focus on conceptual understanding rather than memorising content)
6. Authentic research (business, consultancy, live projects)
7. Authentic audience (conference, journal, public web pages)
8. Reflective assessment of learning process (e-portfolio’s)
Sweepstake!

TESCO onions come from 3 farms:
New Zealand, Spain, England

Conventional production (not organic)
Rank in order of lowest to highest carbon footprint
IMPACT of student research

Food miles or carbon labelling?
Buy Local? Or Buy Global?

Or …

Two people mark it and it sits on a shelf, gathering dust …
“Every university graduate should understand that no idea is fully formed until it can be communicated, and that the organisation required for writing and speaking is part of the thought process that enables one to understand material fully. Dissemination of results is an essential and integral part of the research process.”

(Boyer Commission, 1998: 24)
Aperture, Audience, Authenticity

Within the curriculum

Beyond the curriculum
Aperture 1 – Next year’s cohort

Student Theatre Appreciation Society

Theatre Reviewing Blog
Turning an undergraduate class into a professional research community

Hasok Chang*
University College London, UK

I describe here an ongoing pilot project aimed at a full integration of teaching and research at the undergraduate level. Our chief innovation is the mechanism of inheritance: each year students receive a body of work produced by the previous group of students and make improvements and additions to it; this process can be repeated until publishable materials are produced. This is part of a system of learning that enables students to function as a real and evolving community of researchers.

Tutor-mediated student publishing to a public blog and photo-sharing space (Flickr)

Live project pedagogy
Aperture 4 – multidisciplinary national Conference
Aperture 5 – International Design & Engineering

Co-curricular Undergraduates and postgraduates in teams
Assignment in journal article format

Ownership

Understanding

Creativity

Achievement

Applying constructive criticism

Critical evaluation

CV

Academic recognition

Further dialogue

Motivation to publish more

Within the curriculum

and Beyond
Journals as learning spaces

“I found it hard to change between writing as a learner to writing as a teacher.”

Iterative process
Co-production: trust written advice of others
Detailed feed-forward
Critical skills
Recognition

What’s missing? - The desire for dialogue

GEOverse Journal Article – Alex’s experience

Group project on a provided topic – Retirement migration

Journal article assessment

Simulated peer review by tutor

Submit to GEOverse

Authentic experience of peer review

Lack of dialogue
Departmental conferences

- The right to asylum: a critical analysis of policy & practice
- A map of Headington according to the 3 Gunas
- The Evolution of Sabkas
- Should we buy Organic?
- Revealing Culture & History through Art
- Human-environment interactions on Exmoor
- Adaptations in Dry Land Ecosystem
- Impacts of the Gaia Theory on the Western World
- What is the Nature of the Plant Species Coposition Growing on the Roman Wall in Silchester?
## Multidisciplinary National conferences - Method

### Students presenting

<table>
<thead>
<tr>
<th></th>
<th>Poster</th>
<th>Paper</th>
<th>Total</th>
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<tbody>
<tr>
<td><strong>BCUR 2012 Warwick</strong></td>
<td>71</td>
<td>98</td>
<td>169</td>
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<tr>
<td><strong>BCUR 2013 Plymouth</strong></td>
<td>94</td>
<td>81</td>
<td>175</td>
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<tr>
<td><strong>BCUR 2014 Nottingham</strong></td>
<td>154</td>
<td>136</td>
<td>290</td>
</tr>
<tr>
<td><strong>(% sample)</strong></td>
<td>49 / 319 (15%)</td>
<td>41 / 315 (13%)</td>
<td>90 / 634 (14%)</td>
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Results

Language;
Liminal space;
Empowerment;
An authentic experience;
Escaping institutional and disciplinary ‘bubbles.’

Reciprocal elucidation

‘It is completely different to presenting within university because you can be questioned by people you are not studying with, who are likely to have expertise in other areas relevant to your research. This can result in bidirectional exchange of information in which both myself presenting, and the student asking the questions, gain greater knowledge of the subject area.’ (R52)
British Conference of Undergraduate Research (BCUR)
Alex’s experience

Immediate feedback
Learning from others
**Defended** the research
Escape the bubble of geography
Too late to impact on my marks!
Spot the difference!

Writing an article:

- Co-production: trust written advice of others
- Detailed feed-forward
- Critical skills
- Recognition
- LACKING A CONVERSATION

Presenting at a conference:

- Critical thinking through dialogue
- Instant feedback
- Critical skills
- Recognition
- TOO LATE TO MAKE CHANGES
- NO LEGACY

DIALOGIC FEEDFORWARD
Principles for undergraduate research dissemination

- Build ‘publication’ into degree programmes
- Use student research findings in the Curriculum
- Engage students in the publication process (e.g. editors/reviewers, sourcing articles, conference / event organisation, marketing and promotion, TV…)
- Make use of digital technologies (wiki, blog…)
- Scaffold publication opportunities (build confidence)
Institutional approaches

- Get Published!

WATCH https://www.brookes.ac.uk/staff/pese/get-published/
MUSEUM EXHIBIT

Tornado disaster, Kansas, USA.

Independent study
Community involvement
Made a difference during the research
Open to the public
Static
Less discoverable
Get Published! Conference and Open Access repository

- University wide conference (open to public)
- Being published in student research repository (online)
Top down AND Bottom up!

Resourcing for research experiences;
Institutional prioritisation of research literacy;
Curriculum design of research pathways at programme level;
Engagement with external events (PIP, BCUR);
Support in-house innovation e.g. Teaching fellowship (Reward and recognition);
Celebrate student success - Research repository
Funding linked to quality

Measuring quality teaching

IRIS (Institute for Research in Schools)

Conclusion

- We can *personalise* and *professionalise* the curriculum through providing research and dissemination opportunities

- Structure authentic research experiences for students to build confidence within and beyond the curriculum

- Institutional research cultures and strategies can be inclusive of students as researchers, start early

- The research – teaching nexus is a good starting point for networking and sharing between disciplines / institutions


Higher Education Academy resources

• Healey, M. Jenkins, A & Lea, J. 2014. Developing research based curricula in College-based Higher Education

• Walkington, H. (2016) Engaging Students in Research

• Walkington, H. (2016) Pedagogic approaches to developing students as researchers, within the curriculum and beyond

• Walkington, H. (2015) Students as researchers

• Walkington, H. (2016) The context of students as researchers

• Walkington, H. (2016) Levels of Student Participation in Research

• Walkington, H. (2016) Disseminating Student Research Findings
Questions?

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<thead>
<tr>
<th></th>
<th><strong>10 salient mentor practices</strong></th>
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<tr>
<td>1</td>
<td>Strategic pre-planning to respond to students’ varying needs and abilities throughout the research process.</td>
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<tr>
<td>2</td>
<td>Set clear, scaffolded expectations.</td>
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<td>3</td>
<td>Teach the technical skills, methods, and techniques of conducting research in the discipline.</td>
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<td>4</td>
<td>Balance rigorous expectations with emotional support and appropriate personal interest in students.</td>
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<td>5</td>
<td>Build a sense of community among members of the research team.</td>
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<td>6</td>
<td>Dedicate time to one-on-one, hands-on mentoring.</td>
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<td>7</td>
<td>Increase student ownership of the research over time.</td>
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<td>8</td>
<td>Support students’ professional development through networking and explaining norms of the discipline.</td>
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<td>9</td>
<td>Create intentional, laddered opportunities for peers and “near peers” to learn mentoring skills and to bring larger numbers of undergraduates into scholarly opportunities.</td>
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<td>10</td>
<td>Encourage and guide students to share findings in presentations and writing.</td>
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