Learning Outcomes and Curriculum Development in Physics

Organisational and Gantt charts

The brief for the Working Parties (WP) has been lifted out of the project proposal and is as follows:

**WP1:** What types of physics course are being taught and how are the courses evolving? How many students do physics and what are the trends? What types of multidisciplinary and service teaching and learning occurs and how are these adapting to the changing needs of client departments? How has curricula evolved and how have the degrees being offered changed?

WP1 has been split into two with:
- **WP1A** looking at mainstream data and
- **WP1B** looking at multidisciplinary and service teaching data.

**WP2:** Collect data on student satisfaction, attitudes, views and backgrounds.

**WP3:** Investigate employer satisfaction, needs, involvement in course development. Review data on employment trends. (Includes teachers in the workforce)

**WP4:** Identify and obtain teaching & learning practices that are effective in particular situations, prepare case studies of these practices, including data on how effectiveness is measured. Investigate opportunities for staff development, mentoring, etc.
Organisational Chart

Project Officer: Alberto Mendez

WP1A
Richard Newbury (UNSW)
Geoff Swan (Edith Cowan)
Michele Scoufis (UNSW)
Anna Binnie (UTS)

WP1B
Les Kirkup (UTS)
John Furst (Newcastle)
Alex Merchant (RMIT)

WP2
Marjan Zadnik (Curtin)
William Zealey (Wollongong)
Kate Wilson (ANU)
Maria Hunt (UNSW)

WP3
Judith Pollard (Adelaide)
John O’Byrne (USyd)
David Low (ADFA)

WP4
Michelle Levitt (Melbourne)
Susan Feteris (Monash)
Anton Rayner (UQld)

Overview/quality: Mike Prosser, Brian James

Expert Advisory Panel:
Richard Gunstone, John Prescott, John O’Connor, Barry Muddle
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<tr>
<td>Meetings and admin</td>
<td>Steering comm. meeting on Oct 1, Sydney.</td>
<td>Steering comm. meeting on Feb 13, Uni of Melbourne. Draft questions from WPs.</td>
<td>Draft questions from WPs.</td>
<td>Develop follow up interview questions and focus group questions in their teams. Trial and finalise the above.</td>
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<td>Tasks for WP 1 to WP4</td>
<td>WP leaders are selected and the WPs are formed. The area to be covered by the WPs is defined.</td>
<td>Use existing survey tools, project brief and local expertise to design questions for questionnaires, focus groups and interviews.</td>
<td>Assist with trailing questionnaire at selected institutions and modifying appropriately. First questionnaire to be finalised.</td>
<td>Questionnaire administered, data gathered and entered. Work on how to select institutions for follow up interviews. Analyse statistical data.</td>
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<td>Tasks for PO</td>
<td>Advertised and appointed.</td>
<td>Set up database and website for communication amongst the project team. Initial internet search to identify details of all physics teaching at Australian Universities, to be circulated to WPs.</td>
<td>Compile a report on international trends in teaching and learning physics at universities. Getting statistical data from DEST and other sources. Work with WPs on finalising questionnaire.</td>
<td>Help PO by contacting institutions and collecting questionnaires. Draft an outline of the report/book. Liaise with WPs.</td>
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<td>Tasks for Manju and David</td>
<td>Organise PO appointment. Establish WPs. Manju to liaise with WP1 and WP3. David with WP2 and WP4.</td>
<td>Finalising first questionnaire. Obtaining ethics clearance. Obtaining permission from HODs and identifying a contact at each institution.</td>
<td>Peruse and comment on instruments. Prosser to analyse CEQ data.</td>
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<td>Tasks for expert advisors</td>
<td>WP can contact as necessary.</td>
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<td>Meetings and admin</td>
<td>A meeting on July 16 (USyd) to discuss results to date. Each WP to present results. Discuss proposal for Stage 2.</td>
<td>A meeting on Sep 29 (USyd) to identify possible recommendations and implications and good practice.</td>
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<td>Tasks for WP 1 to WP4</td>
<td>WP leaders to organise and run local focus groups and interviews (students, employers, graduates). Work on data analysis and interpretation from first questionnaire.</td>
<td>Work on writing a chapter using data to date.</td>
<td>Prepare first draft of appropriate chapters.</td>
<td>Possible workshops in each state. Finalise book.</td>
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<td>Organise and run HOD interviews (?) Enter data from interviews, transcribe and translate the data into a form that WPs can use. Work on data analysis and interpretation (either with WPs or with Manju/David).</td>
<td>Work with WP on data analysis and interpretation. Prepare results in a form that WPs can incorporate into their chapters.</td>
<td>Work with WP on first draft and synthesis.</td>
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<td>Work with PO and WPs on data analysis and interpretation. Write proposal for stage 2. Manju and David to start working on some sections chapters.</td>
<td>Work with PO to efficiently and rapidly provide feedback to WPs.</td>
<td>Work on synthesis and cross linking of results and data.</td>
<td>Proof read and coordinate.</td>
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<td>Tasks for Manju and David</td>
<td>Advice on methods of data analysis and interpretation. Peruse results and advice on quality and any follow on work.</td>
<td>Advice on report.</td>
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<td>Tasks for expert advisors</td>
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