B) Evaluation of an Interprofessional Curriculum

Tools and Techniques

We are now in a position to report on some of the methods used in our evaluation studies and our peer reviewed articles.

Our studies have used a range of research approaches, quantitative data from scored questionnaires, qualitative data from focus groups or individual interviews or free-text on questionnaires. Data have often been brought together from different participant perspectives to ensure integrity, using the technique of triangulation. Research approaches have included action research designs with the researcher working in collaboration with participants in a cyclical evolving process. We have frequently combined quantitative and qualitative methods using a mixed methods approach. In many instances this has been where scored responses have been exemplified through debate and discussion.

We have always considered governance principles to ensure our research has sound ethical approaches. The original research bid was processed through our Regional Ethics Committee (Leicestershire, Northamptonshire & Rutland Research Ethics Committee 2-05/ Q2502/104, extended and re-confirmation of the extension given in January 2011). The committee endorsed the sound approach to the research and evaluation processes.

Applying the recognised model of Kirkpatrick for summarising educational outcomes and its modifications made by the Joint Evaluation Team, we can outline the measurement tools we have used, see Table 1 and our evaluation map, see Table 2, (Kirkpatrick 1967; Freeth *et al* 2002).

Please see exemplars of our questionnaires and tools at the end of this document.

TABLE 1

Leicester Three Strand Model **Kirkpatrick Levels** ***(Amended version [Freeth et al 2002])***		**Measurement Tools**
Level 1	Learners' Reactions	Free text comments in questionnaires and focus group discussions
Level 2a	Modification in attitudes and perception	Free text comments in questionnaires and focus group discussions. Scaling Measures: Likert Scales; RIPL*
Level 2b	Knowledge and skills	Pre and Post Questionnaires Portfolio Assessment Exam questions (short answer) Reflective Case studies Critiques of Practice
Level 3	Changes in Behaviour	Practice tutors feedback in Portfolio Student statements of intent
Level 4a	Changes in Organisational Practice	Students influencing practice teams in Feedback forms; presentations. One-to-one interviews practitioners
Level 4 b	Service Benefits to users and carers	Focus groups Involvement in teaching Case study evidence Student feedback to practice

*The Readiness for Interprofessional Learning Scale (RIPLS), a validated measure to explore differences in student perceptions and attitudes towards IPE (Parsell & Bligh, 1998, 1999).

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TABLE 2 Evaluation Map Students

Tools	Outputs	Kirkpatrick Levels	Findings and sources
The Readiness for Interprofessional Learning Scale (RIPLS)[1]. Administered one month prior to the event	Although a scale which has been widely used this was not helpful in evaluating learning.	None	Strand one evaluation (Anderson and Thorpe 2008) • Showed no distinction in students readiness for IPE
A pre & post course questionnaire On the learning related to the learning outcomes scored on a Likert scale from 1 very little, to 5 a great deal. Facilitators administered these at the start and end of each event.	Identified knowledge gain relating to the intended course learning outcomes. *Statistical data*	Level 1 and 2b	**Strand one** introduction to interprofessional working (Anderson and Thorpe 2008) • Student age matters • Enjoyed the events • Learning about roles (P<0.001) **Strand Two**: Health in the Community Learning Event (Anderson and Lennox, 2009) • Increased learning (P<0.001) **Strand Three**: Patient safety comparative study (Anderson, Thorpe, Heney, Petersen 2009) • Increased learning
A post course questionnaire For immediate free text responses, considering content, context and timing. These were completed prior to leaving the classroom.	Learner's reactions and learning.	Level I and 2a	**Strand Three**: Learning from Lives (Anderson & Smith 2010). • Challenging but worthwhile to learn together • Awareness of roles and relationships "*Key learning and the benefits from today were about breaking down barriers and being able to work with people of different disciplines. It will benefit me in the future to perhaps not be intimidated by other professions or devalue the skills and information and views that they have to offer*". (Social work student MA). • Importance of team working *"Importance of team working in order to achieve the best outcomes for service users*". (Social work student BA)
Focus groups Conducted by an independent researcher with a random sample of uni professional students, up to 12, within four to ten weeks of the learning.	Detailed data available with information on how they enjoyed the learning, attitudes, knowledge and behaviours	Level I, 2a, 2b and 3.	**Strand Two:** Health in the Community (Anderson and Lennox, 2009) • Attitude change **Strand Three**; Workshop on communication skills - Listening Project (Anderson *et a*l 2010b). • New Learning • Developed knowledge • Practised skills **Strand Three**: Interprofessional Care Planning (Anderson and Thorpe 2009) • All of above Behaviour changes

[1] The Readiness for Interprofessional Learning Scale (RIPLS), a validated measure to explore differences in student perceptions and attitudes towards IPE (Parsell & Bligh, 1998, 1999 see references above) .

Evaluation Map Stakeholders

Tools	Outputs	Kirkpatrick Levels	Findings and sources
Interviews with users and carer educators	Data on how to change practice and student attitudes	Level 2a, 4b	**Strand Two and Three** (Anderson and Smith 2010) • Users value role as educators • Student attitudes identified as changing
Facilitator post course questionnaire and Interviews containing nine free text questions on the learning process, their views of student engagement and learning. These were returned within one week	Observation data on student enjoyment, behaviours and attitudes. Conversations with social work students identified that they found the learning enjoyable, challenging, overwhelming and wanted better preparation. Asked for more IPE events.	Level 4a	Evaluation of interprofessional facilitators (Academic and practice teachers) • Impacts on service changing attitudes of practice based educators (Anderson and Thorpe 2010)

On-going

Tools	Outputs	Kirkpatrick Levels	Findings and sources
Portfolio Analysis ~Content analysis of student reflections on competence throughout and on completion of their professional training	Progression and consolidation of learning. Written reflections on students progression of learning including knowledge, skills, attitudes and behaviour	Level 1,2 a &b and 3	Conference proceedings: Anderson *ES; Smith R; Ford J & Lakhani N . International Interprofessional Health and Social Care Conference 'Learning Towards Better Together'. 6-7th July 2010. Paper entitled: '*Using a Region-wide Reflective Interprofessional Portfolio to Assess Interprofessional Competence' • Analysis of student Portfolio's and reflections of learning.
Student Presentations Feedback analysis to practice	Students able to critically appraise users' needs and suggest changes to care. Changes received by practice teams and fed back to change service delivery and care.	Level 4a, 4b	Student feedback from the Leicester Model ; Health in the Community; Learning from Lives and Interprofessional Care Planning (see above papers) • Student feedback on case studies which outlines how to improve care delivery to service users.

References Involving Interprofessional Education Evaluation

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EXEMPLARS OF EVALUATION TOOLS:

STUDENTS

Student evaluation is seen as an expected part of student learning and is an integral aspect within all our professional curriculum committees. Accessing students for educational research requires ethical permission from the Higher Education Committee. Most departments have ethical processes and require the submission of a research protocol. In all our studies we have applied relevant local ethical principles and ensured students have consented to participate.

Student Quantitative Data

a) **Questionnaires**: Pre and post students' attitude testing using Likert Scales. Students normally complete self assessment *Likert items* attached to a visual analogue. Students tick or circle to indicate their response. To overcome bias we have used positive and negative rated scales. We analyse the outcome using non-parametric testing (Man Whitney *U*-test) reporting on medians and modes as the data is ordinal. For Example:

I was not looking forward to studying alongside other undergraduate health care professionals	1	2	3	4	5	**I was looking forward** to studying alongside other undergraduate health care professionals
I felt prepared for studying with other students from different health care professions	5	4	3	2	1	**I did not feel** prepared for studying with other students from different health care professions

The small group tasks to be achieved **were not appropriate** for the learning outcomes of the course	1	2	3	4	5	The small group tasks to be achieved **were appropriate** for the learning outcomes of the course

Student Qualitative Data

a) **Free text questionnaires**: Mainly using a few questions which will indicate the most and least useful aspects of the learning events. Students can indicate how to improve the learning and any additions they would have liked included. For Example:

Student Evaluation Questionnaire

Post Course – About Your Learning

Please complete the following questions**:**

What was the best thing about this course?

Are there any changes you would suggest?

From your perspective what's the most important learning you will take forward into practice?

b) **Focus Groups**: When establishing most of our new teaching we bring students together to discuss intentions before the teaching, involving them in the planning, and we also gather students together after the interprofessional events to listen to their views on the learning. Most uni professional focus groups help to identify and clarify the profession specific needs while joint focus groups can help identify common issues. Holding focus groups requires consent. Participants need to know if they are taped and how the information will be used. A list of prompt questions are generated ahead of the event. The focus group leader is normally skilled in the process of conducting these group discussions and is not part of the student learning events.

Student Mixed Data

a) Combining Likert items with qualitative data clarifies student concerns and helps overcome the problem associated with self-scored Likert Scales which try and measure psychometric elements using one type of scale. In particular such self-rated attitude scales have been criticised for issues of comprehension concerning the statements used against *Likert items* (acquiescence), avoidance of scoring at the extremes or central tendencies, and scoring for the expected (social desirability).

PATIENTS/SERVICE USERS AND PRACTITIONERS

All patients/service users and practitioners (health and social care staff) cannot be included in educational research within the UK unless the researcher has relevant National Health Service (NHS) Local Ethics Committee(s) (LRECs) approval. Studies involving social services should apply for ethical approval through the Research Group of Directors of Social Services (ADSS). The main organisation of local ethical approval within the UK is through the Central Office for Research Ethics Committees (COREC) whose website is very helpful in getting started. All our research was approved with our local NHS research ethics committee.

Our studies involving **patients/service** users have used qualitative methods. We have spent many hours listening through interviews (often home visits) and focus groups to patients/service users views. This work has provided insights into the planning, preparation and teaching role patients/service users are able to manage. On the whole we have been impressed with the support of the general public to help in the teaching of the next generation of practitioners.

Practitioners working in a range of different health and social care settings continue to participate in our educational research studies. Many have been partners in action research where new education models have been established. In addition many complete questionnaires with quantitative and/or qualitative data. Similar to the work with patients/service users many have been interviewed and have attended focus groups in the collection of qualitative materials.

We attach examples of interview and focus schedules:

Examples of tools used in qualitative data collection with patients/service users and with practitioners.

Focus Group Questions with Practitioners

Tell me about your experiences in helping shape local interprofessional learning (IPL)?

What has been the impact on you?

Can you tell me about any additional issues about your involvement with IPL?

Interview Schedule Practitioners

What are your views about Interprofessional education (IPE)?

What benefits have you gained from being associated with the local strategy for Interprofessional Education (IPE)?

Do you have any concerns about IPE?

Do you feel prepared and fully able to facilitate IPE?

How important do you see IPE to be in your future teaching and personal role?

What impact has taking part in IPE had on your teaching?

Are there impacts on others?

Any other views?

Patient/service users interview Schedule

If you could tell me in your own words what happened when the students came? How many of them were there*?*

(And then probe around issues raised?)

Could you tell me what you think they learnt the most from coming to talk to you?

Did you find it difficult talking to the students about things that are personal to you?

(probe as appropriate e.g. you thought it went alright?)

Has talking to the students affected your illness in any way?

Would you do it again?

What do you think about patients like yourself being asked to talk to groups of different students in this way?

Thank-you and final reflections