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The Higher Education Academy

"Beyond Competence" project Final Report University of Leeds

Alison Ledger, Research Fellow, Leeds Institute of Medical Education
29th October, 2012

Contents

Key words for report

Workplace learning: Clinical placement: Healthcare education:

Acknowledgements

This project was funded by the Higher Education Academy National Teaching Fellowship Scheme and was a collaboration with the University of Southampton. The team at Leeds wish to acknowledge our colleagues in audiology, nursing, and medicine who helped to facilitate our access to students and staff.

Executive summary

The HEA-funded "Beyond Competence" project was a research collaboration between the Universities of Southampton and Leeds. The project aimed to explore students' early clinical placement experiences in audiology, medicine, and nursing. At Leeds, we set out to explore students' understandings of their clinical placement learning, what clinical placement was like for students, whether there were any differences between students and staff members' understandings of early clinical placements, and how workplace learning can best be facilitated.

There were three modes of data collection at Leeds – individual interviews, an online survey, and a series of resource development groups. Thirty-eight healthcare students (9 audiology, 17 medicine, and 12 adult nursing) and twenty-one healthcare educators (2 audiology, 9 medicine, and 10 nursing) were interviewed about their experiences of early clinical placements; interviews were transcribed and analysed interpretatively. An online survey was designed to confirm findings from the individual interviews and was completed by 120 students (14 audiology, 73 medicine, and 33 adult nursing); survey responses were summarised using descriptive statistics. Three resource development groups (1 for each profession) were undertaken to discuss the interview findings with students and to gain their advice on what would be most helpful to them during early clinical placements. Summary notes of the groups were prepared by the research fellow at Leeds.

Individual interviews highlighted key issues in early clinical placement learning, such as the importance of "learning how to learn" in clinical environments, the degree to which students are involved and feel part of the team, and the influence of time on students' familiarity with their placement sites. Audiology students seemed particularly well-supported in their learning, due to factors such as the nature of audiology work, the small size of the audiology profession, and the length of audiology placements, along with the students' levels of involvement, inclusion in social events, and employment status within the NHS. Both interview and survey responses indicated that healthcare students' experiences depended on where they were placed and differences in practice were observed between university and placement sites, between different placement sites, and between individual practitioners. Resource group participants expressed a need for location-specific information, rather than generic information in print or on websites.

Previous research and practice in healthcare education has assumed that to enhance students' learning in clinical settings, students must be better "prepared". In contrast, the "Beyond Competence" project emphasized the role of the specific clinical environment in students' learning. We observed that students learned through practice, through making minor mistakes, and through interaction with particular people, objects, and places. Rather than focusing on preparation, we suggest that educators and researchers consider the ways that clinical interactions and environments can be improved.

Through the "Beyond Competence" project, we have worked to shift understandings of clinical placement learning, through presentations at various professional education conferences and events. Future dissemination plans include a local workshop with university and healthcare staff in Leeds and a series of academic publications.

Background

In the past ten years, a vast amount of literature has been published in relation to healthcare students' early clinical placement experiences. Throughout this literature, healthcare students' "preparation for practice" has remained a dominant concern (for recent examples, see Illing et al. 2008; Matheson & Matheson 2009; Siu et al. 2010). Students have been described as ill-prepared for particular areas of practice, such as critical care (Ruth-Sahd et al. 2011), older adult care (Clendon 2011), end-of-life care (Siu et al. 2010), mental health nursing (Curtis 2007; Happell 2008a, 2008b), work with people with disabilities (Chenoweth et al. 2004; Guillett 2002), interprofessional work , and rural practice (Bender & Braziel 2004; Vanleit & Cubra 2004). Students have been noted to require preparation in order to effectively respond to issues such as bereavement (Carson 2010), domestic violence (Hayward & Weber 2003), and patient restraint (Valler-Jones & Shinnick 2005), and a large proportion of studies have drawn attention to deficiencies in students' competencies in clinical practice settings. Deficits have been observed in areas such as clinical skills (Matheson & Matheson 2009), communication (Matheson & Matheson 2009), pharmaceutical knowledge (Manias & Bullock 2002a, 2002b; Illing et al. 2008), and informatics knowledge (McNeil et al. 2004). These studies often raise serious concerns about the quality of current healthcare education.

A range of interventions for improving preparedness have been implemented and evaluated. These include various types of simulation (Bland & Ousey 2012; Hope et al. 2011; McLafferty et al. 2010; Richards et al. 2010; Ruth-Sahd et al. 2011), transition courses (Berridge et al. 2007; Dare et al. 2009; Matheson et al. 2010; O'Brien & Poncelet 2010), clinical skills training (Barnard et al. 2011; Berridge et al. 2007; Brunt et al. 2008; Naylor et al. 2010), interprofessional experiences (Koch et al. 2009; Morison et al. 2010; Pelling et al. 2011; Ruth-Sahd et al. 2011), and programmes aimed at improving students' attitudes towards particular areas of practice (Chenoweth et al. 2004; Curtis 2007; Gum 2007). Reported outcomes of preparedness interventions are variable and persistent problems in healthcare education remain, such as students' difficulties in adjusting to complex clinical environments (Chittenden et al. 2009).

Much of the existing literature on healthcare students' preparedness makes a distinction between two discrete sites of learning. According to this view, students learn "theory" in the university and then "practice" in clinical settings (see Eyal & Cohen 2006; Hope et al. 2011; Matheson et al. 2010; Prince et al. 2005). Students' entry into clinical settings is understood as an abrupt transition, which is highly problematic and stressful (Berridge et al. 2007; Cooper et al. 2005; O'Brien & Poncelet 2010; Prince et al. 2005). Efforts to improve students' preparedness for practice have therefore aimed to "smoothen" this transition (Berridge et al. 2007; Cooper et al. 2005; Matheson et al. 2010) and to reduce the perceived "theory to practice gap" (Berridge et al. 2007; Hope et al. 2011).

Essential to previous work on healthcare students' "preparedness" is the metaphor of learning as "transfer" (Hager & Hodkinson 2009, for examples in healthcare education see Matheson et al. 2010, p. 8; Hope et al. 2011, p. 715). Knowledge is viewed as a product, which can be moved from place to place in a predetermined way. Accordingly, the desired outcome of preparedness interventions is for students to "acquire" the knowledge and skills needed for practice (see Carson 2010, p. 367; Matheson et al. 2010, p. 8). It is assumed that individual students will learn knowledge and skills in the university which they can later take into the workplace (Matheson et al. 2010). From this position, knowledge is considered to be relatively stable over time and across locations. There is comparatively little recognition of the crucial role of organisation-specific cultures, practices, and relationships in healthcare professionals' work.

In contrast, our previous research has shown how doctors' performance is highly contingent on a range of unpredictable organisational, practical, and clinical factors, such as the amount of support doctors receive and site-specific practices (Kilminster et al. 2010; Kilminster et al. 2011). In other words, the way that healthcare professionals practice may be dependent on where they are working and who they are working with at a particular time. Across interviews and observations, Kilminster et al. (2011) found that doctors' reports of actual practice deviated from formal practice protocols and that practice was dependent on "the setting, the trust in question, time of day or night, the composition of the team and whether other members of the team

were present" (p. 1011). Furthermore, doctors' practice was observed to be affected by others' perceptions of their abilities and by individual consultants' preferences. These are aspects that it would be impossible for students to learn prior to entering a clinical setting. Rather than thinking about learning as transfer, it may be more critical to understand the ways in which students learn organisation-specific aspects and develop their relationships with others on-site.

Leading workplace learning theorists now reject the metaphor of learning as "transfer", because "transfer" implies that knowledge can be applied in new settings in an uncomplicated way (Hager & Hodkinson 2009). Instead, the metaphor of learning as "becoming" is preferred. "Becoming" portrays learning as an ongoing process, which is both deliberative and contingent on the ever-changing situations in which learning occurs (Hager & Hodkinson 2009; Hodkinson et al. 2008). At Leeds, we are working with these understandings to develop new ways of understanding healthcare education. We are endeavouring to take greater account of the complexities of healthcare practice, so that we can significantly improve the quality of healthcare training and work.

The *Beyond Competence* project is a response to the need for more nuanced accounts of healthcare practice and our desire to enhance the experience of students entering clinical placements for the first time.

Aims and objectives

The aim of this project was to further our understanding of students' early clinical placement experiences in audiology, medicine, and nursing. The following research questions were devised at Leeds at the beginning of the research project:

1. What do students say they are doing (and not doing) on clinical placement?
2. What is the clinical placement experience like for students?
3. Are there any differences in what students say they are doing and what staff members say that students are doing?
4. How can we help facilitate clinical placement learning?

Methodology

The project was undertaken in three phases: 1) qualitative interviews with healthcare students and staff, 2) an online survey administered to students, and 3) resource development groups conducted with students. The rationale for these methods is explained below.

Interviews

Individual interviews were undertaken with healthcare students and teaching staff in the three professions (audiology, medicine, and nursing). A qualitative, exploratory approach was taken, in order to learn more about what students were doing on placement. Interviews were narrative in style, to allow students to talk about what they considered most important in clinical placement learning. The research fellow asked interviewees an open-ended question to elicit stories about placement learning - "tell me about your placement, all the things you think it may be important for me to know". Follow-up questions were then asked to gain additional information and clarification, such as "Can you tell me about a specific time when you felt part of the team?". Interviews were audio-recorded and later transcribed. Interview transcripts were then read repeatedly and summarised by way of one to two page case summaries (one per interview). Members of the research team read the case summaries independently and then came together to discuss and determine key research findings.

Survey

The purpose of the survey was to investigate the extent to which issues identified in the interviews were experienced by other healthcare students. An online survey was therefore developed to explore the experiences of a wider group of students. The survey contained ten questions about students' clinical

placement experiences, including questions requiring a likert-scale response and open-ended questions requiring a free-text response. Students were asked to rate how frequently they felt part of the team and participated in a range of placement activities, and if comfortable, to share any experiences of harassment or differences in practice (see Appendix C). Quantitative survey responses were analysed using descriptive statistics and text-based responses were employed as additional examples of students' placement experiences.

Resource development groups

The aims of the resource groups were to discuss interview findings with students and to gain their advice on what would be most helpful to them during early clinical placements. It was assumed that an informal group format would be the best setting for encouraging student feedback and discussion, and would be most accessible to students.

Implementation

Interviews

Eligibility criteria for the interviews were determined in partnership with healthcare course staff and were guided by the timing of initial placements in audiology, medicine, and nursing at Leeds at the time. In audiology, students began a year-long placement in their third year of training. In nursing, students began working and learning on hospital wards within weeks of starting their training courses. In medicine, the undergraduate curriculum had recently changed so that students interacted more with patients in the first year of training than in previous years. For these reasons, third year audiology students, first year nursing students, first year medical students undertaking the new curriculum, and third year medical students undertaking the old curriculum were considered eligible to participate in interviews. Only nursing students who were undertaking adult nursing studies were recruited, as it was assumed that child and mental health nursing students would encounter a more complex set of issues on placement. Educators who taught undergraduate audiology, medicine, and adult nursing students were also considered eligible for participation and were interviewed to determine whether there were any major differences between students' and staff members' understandings about placement.

Students were recruited through a mixture of face to face meetings with students during class time and email advertisements using course staff as gatekeepers. Nine audiology students, seventeen medicine students (6 first year, 11 third year), and twelve adult nursing students volunteered for the study and followed through with a research interview. Healthcare educators were recruited through existing university contacts (university staff members forwarded information about the project to colleagues who supervised students). Educators were asked to contact the research fellow if they wished to participate. Two audiology educators, nine medicine educators and ten nursing educators volunteered to be interviewed.

There were no problems with recruitment above and beyond what you would normally expect for a study of this type, which required participation from busy healthcare staff and students. To maximise participation, interviews were arranged at times and places convenient to the participants (either at the university or in non-clinical areas at placement sites). The research fellow was also careful to keep interviews to time (most interviews were about an hour in duration). As participants were volunteers, it should be acknowledged that it is likely that they were people who were enthusiastic about placement teaching and learning.

Survey

All first year students in nursing (N=170), third year students in medicine (N=250), and third year students in audiology (N=16) were sent a recruitment email via members of university staff. Students were given one month to complete the survey and two reminder emails were sent to each group of students during this period.

The response rate was approximately 28%. One hundred and twenty students completed the survey, including 14 audiology students, 73 medical students, and 33 nursing students. This means that 88% of audiology students participated, 29% of medical students participated, and 19% of nursing students participated. It is likely that the high proportion of audiology students was due to the small size of this particular group and their previous participation in the research. The research fellow was well known to many of the audiology students, as nine of the sixteen students had participated in the earlier interview phase. Furthermore, the email request was sent out by the audiology clinical placement coordinator who was also well known to the students. In contrast, the medical students were a much larger group, many of whom did not have a close relationship with the research fellow, nor the person who sent out the recruitment email.

Resource development groups

Three resource groups (one for each profession) were undertaken with healthcare students. Resource group participants were obtained from the pool of previous research participants, including interviewees and survey respondents. Sixteen audiology students, seven third year medical students, and nine nursing students volunteered to participate in the resource development groups. It is likely that a high number of audiology students participated because the resource group was held during one of their "university days" and was helpfully facilitated by their clinical placement co-ordinator.

The groups were one hour in length. Each group began with a reminder about the purpose and methods of the project and an update on the research progress. This was followed by a section on the emerging findings, in which two emerging findings were shared with the group (one general finding and one profession-specific finding). Students were encouraged to discuss these findings and to comment on whether the findings were commensurate with their own experiences. Students were then invited to suggest ideas for ways that placements could be enhanced and for resources that would be helpful for students entering placement for the first time.

Outputs and findings

The findings from each of the research phases are summarised here in turn.

Interviews

Detailed summaries of the interview findings are in Appendices A and B. Four key issues were identified from the interviews with healthcare students and teaching staff – learning how to learn, students' levels of involvement, feeling part of the team, and the significance of time in early clinical placement learning.

Learning how to learn

Both students and staff indicated that a critical part of early clinical placements was learning how to learn in clinical environments. Students described how they had learned how to gain access to patients, who to ask for help, and when to ask questions. Students also emphasised the need to speak up and to use their initiative to gain access to patients and staff:

> there was one person going into surgery and I said to one of the nurses, 'Am I able to go along with them?' and she said, 'Just let me speak to the consultant.' and she rang up the consultant and said, 'Can a medical student go along?'. They said 'yes' (Matthew, 1st year medical student).

Staff similarly described how students need to get to grips with the clinical environment when they begin clinical placements. William, a medical consultant explained:

> they've got to find out what's happened to the patient, they've got to, go and work out who on the ward knows when things happen... they need to know how a ward works and how to, how you get things done on a ward, so if you can get that instilled at the earliest opportunity I think that's very helpful.

Involvement

Across all three professions, students indicated that they valued opportunities to be involved and to learn through making mistakes. Students shared a perception that the best way to learn was through clinical experience:

> I think you learn so much more by experience than you learn by reading it out of a book... you can't learn communication skills from like an exercise, you need to actually go and practice them, like practice makes perfect (Catherine, 1st year medical student).

Additionally, students explained how "real" practice was different to practice in the university or classroom. Students in all three professions explained how tasks which previously appeared simple were now more complex in the clinical setting:

> I've never done like a hearing test on an actual patient before and it's different from doing it on say like another student or staff member... if it's a patient, you have to sort of bring it up a level... you realise that there's actually more to remember than what you thought you would have to (Justine, 3rd year audiology student).

Students' interview responses indicated that they felt motivated when they received opportunities to practice and to make contributions to clinical work. Though this was recognised by clinical placement staff, staff seemed less concerned about the extent to which students contribute to the work of the clinical team. For example, Brian, a surgical consultant said:

> I'm not too bothered... providing they concentrate on the bits they need to pick up, I don't think it's important that they 'help' from our point of view certainly... I mean [I] appreciate that from their point of view it might be nice to feel useful, but I suspect in practice they don't do very much.

Feeling part of the team

Another key issue in students' early clinical placement experiences was the degree to which they felt part of the team. Students described positive learning experiences when they felt included in the team on either a personal or professional level. Often it was very small things that engendered a sense of inclusion, such as being introduced by name, being offered a cup of tea, or being invited to a team outing. The importance of "simple" welcoming gestures was recognised by Meredith, a GP educator:

> It's coming out to somewhere where they feel welcome... informal chatting with the staff and coming into the coffee room... just having a locker to lock their things away, somewhere to hang their coat, it's simple things but I think hopefully it does make them feel they're part of the team and belong which I don't think can be underestimated really!

Audiology students in particular described feeling "part of the team". A number of features specific to audiology seemed to facilitate students' inclusion in clinical teams, such as the nature of audiology work (one to one, in separate departments), the small size of the audiology profession, the length of clinical placements (1 year at Leeds), the degree of students' involvement, and students' employment status within the NHS. It was evident that audiology students were often included in social events and students and staff often referred to each other as "colleagues", "friends", or even "family". Emily, a 3rd year audiology student, recounted a time when she was included in a team outing to an Italian restaurant:

> A couple of weeks ago, one of the Senior Audiologists retired, so they invited, even though we'd only been here a couple of weeks, they invited me and the other student to a meal!... it was really nice 'cause when we was there as well, we weren't side-lined to speak to other people, we was all involved.

Time

Data from the interviews indicated that time was a critical factor in the success of early clinical placements. Students' interview responses indicated that they were more able to learn when they were placed in a new clinical environment for an extended period of time:

> In that fourth or fifth week you almost feel like you are settled and you want to stay rather than move on to another placement because you know your role, you know you feel part of the team a bit, everyone knows your name... it's quite difficult having to do that every time... it really does help your learning when someone is actively thinking, 'What would the third years like to do? How can we help the third years?' and you can only really do that when you have a few weeks there (Charles, 3rd year medical student).

> Because I was here for 8 weeks... people thought themselves it was important to teach me things because if they taught them to me I could help out... [it's] worth their while putting in a little bit of effort because then I'd know stuff and I could help out (Gabby, 1st year nursing student).

Interviews with audiology students and staff revealed that audiology students were afforded extra time for appointments at the start of placements, when they were just beginning to practice procedures. This early investment appeared to allow staff and students time for discussion, explanation and feedback, and enabled students to make significant contributions to the team later on. Meg, an audiology educator, explained how her early investment in students paid dividends later in the placement:

> We find that if you do that [work with students] intensively for the first 6 months you get them to a much better stage of competence and confidence so that you can actually get more out of them in the second 6 months... you've got 2 students who are useable

Survey

A detailed summary of the survey results is in Appendix D. As the survey findings primarily served to confirm findings from the research interviews, only three particularly noteworthy findings are repeated here.

Students' survey responses further indicated that audiology students were a group who felt particularly "part of the team". When asked, "Given that you are a student, how much did you feel part of the clinical team?", all audiology students recorded a frequency rating of usually, most of the time, or always (Figure 1). This was different to the responses of medicine and nursing students, some of whom recorded frequency ratings of sometimes or not at all.

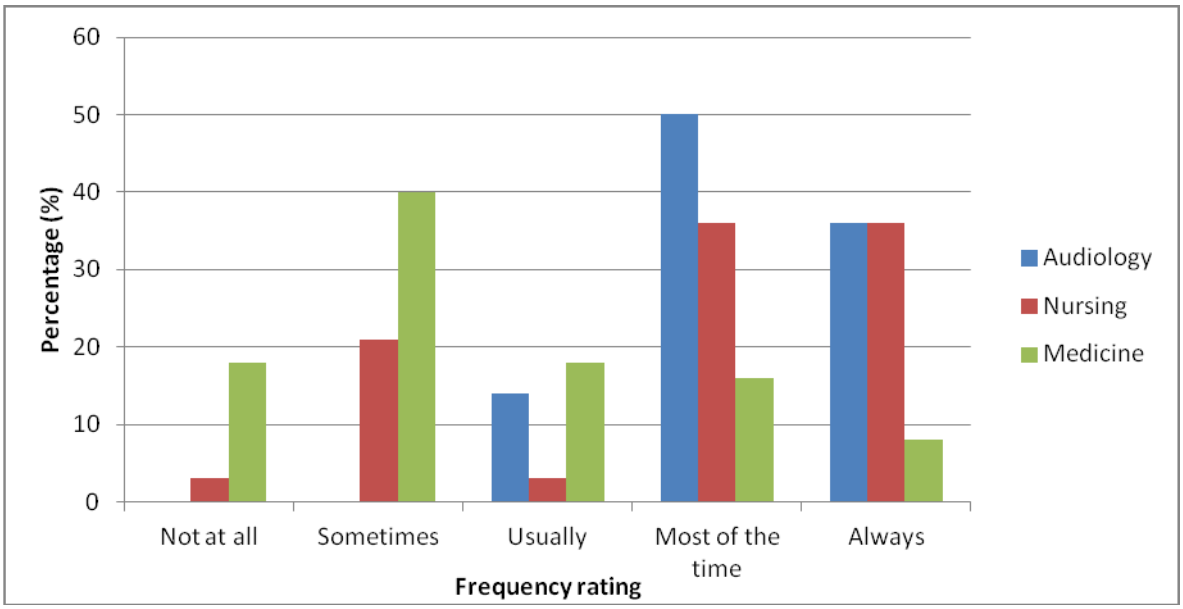

Figure 1. Frequency with which students felt part of the team

One of the initial findings from the interviews was that students on early placements were encountering differences in practice between the university and placement site, between different placement sites, and between individual practitioners. We therefore included a question about practice differences in the survey ("During your last or current placement were there any occasions when what you had been taught in university was different, or conflicted, with anything that happened in the placement?"). In response to this question, thirty-nine students opted to provide descriptions of particular situations. These students most often recounted situations in which they had encountered "local" or "in-house" practices while on placement. Students reported that they had observed minor differences in the ways clinical procedures, examinations, and documentation were undertaken, such as the order of procedures, the treatment prescribed, or the equipment used. Differences were rarely attributed to poor practice or "bad habits" on the part of healthcare professionals. Instead students acknowledged that there was less time to be thorough in the clinical setting and that procedures needed to be adapted according to patients' needs and the particular environment in which they were working. Distinctions between university and placement practices are exemplified in the following (medical) students' response:

> I have come across many times when the qualified member of staff has said 'In your OSCE [examination] you should do it like this, but no-one really does in real life, we all do it like this..'

Although procedural differences could be perceived as confusing, it was evident that students had developed strategies for dealing with variations in practice. These strategies included asking qualified staff to explain the reasons for differences, striking a balance between university and clinical placement practices, or developing their own preference after observing a number of different approaches. It was also clear that some students changed their practice according to who they were with at a particular time, as evident in the following response, "I did it when the consultant was there, but not when they weren't watching."

A further interesting finding related to the people students looked to for support when early clinical placements became difficult. In response to the question, "If any challenges have arisen during your placement, who did you talk to?", students most frequently reported talking to a fellow student, a friend or family member, or their clinical supervisor or mentor (in that order). Students were least likely to report talking to a personal counsellor, a university lecturer, or a staff member from another profession. Only 24 students (20% of respondents) reported taking advantage of their personal tutor at the university. Audiology students appeared the most likely to discuss challenges with their clinical supervisors. Eighty-six percent of audiology respondents (12 out of 14 students) reported that they talked to their clinical supervisor, as opposed to 22% of medical student respondents and 48% of nursing student respondents (see Figure 2).

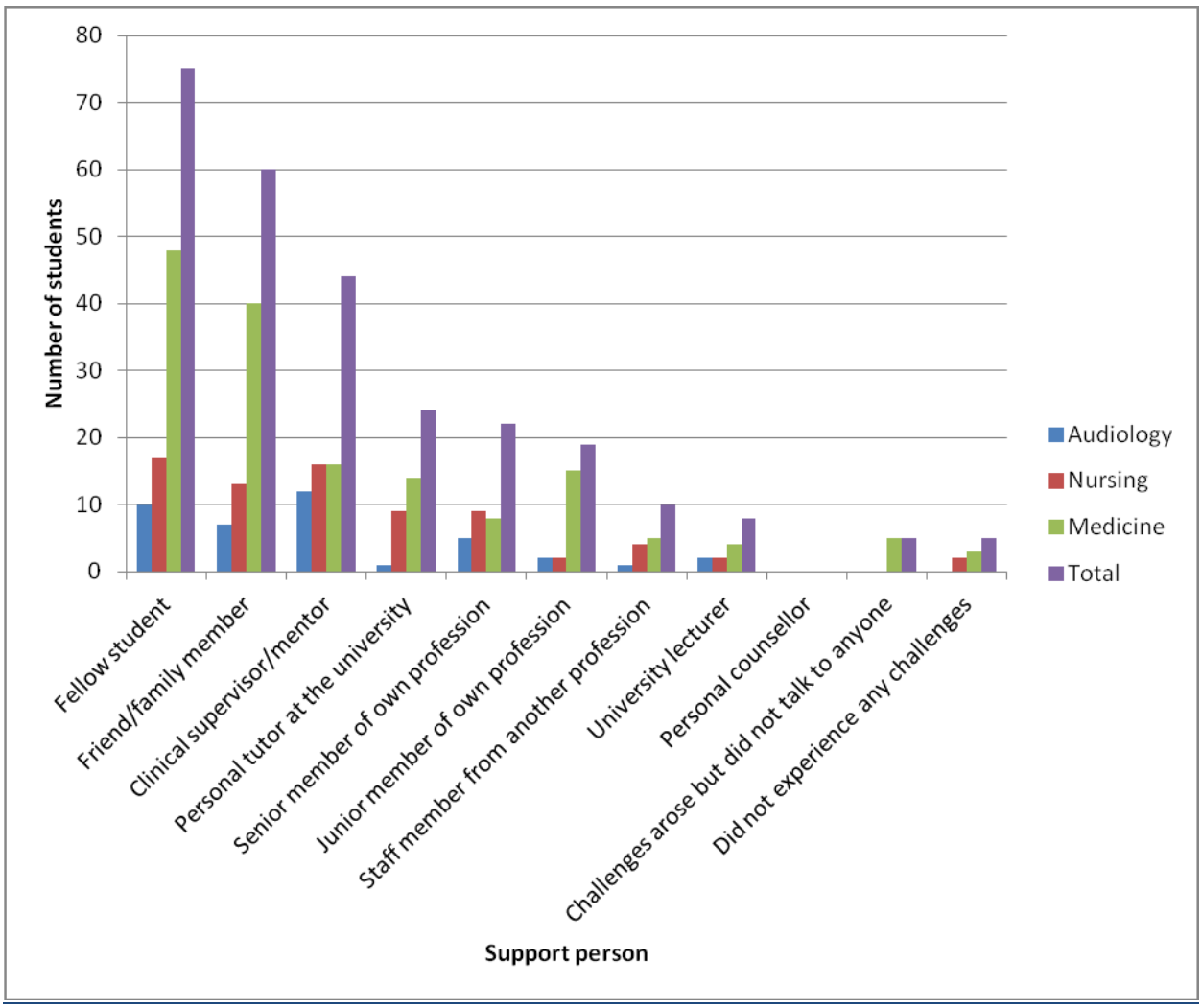

Figure 2. People students reported talking to when challenges arose

Resource development groups

The main purpose of the resource development groups was to gain advice from students as to what sorts of resources would be helpful to them during early clinical placements.

Resource group participants expressed doubt that it would be possible to develop a generic web resource, as their experiences depended on the particular location where they were placed. They suggested that it would be most helpful to have face to face contact with more advanced students in their placement sites, or students who had been on placement in the same place the previous year. This contact would allow them opportunities to ask location-specific questions, such as where certain equipment is stored, who they should approach for help, or where they should park their cars. Nursing students further highlighted the value of the initial, intermediate, and final interview process for gaining feedback from mentors, and medical students valued opportunities to refresh their clinical examination skills when entering placement.

It is likely that resource group participants' responses were influenced by existing resource provision at Leeds. Nursing students spoke favourably of the Leeds Practice Placement Unit website and medical students reported that they were already using existing internet resources and applications on their I-phones. The medical students expressed confidence that they could access web resources as needed and indicated that a share site might allow them to share resources with their peers.

In summary, the students tended to suggest improvements to current placements, rather than offering ideas for new electronic resources. This occurred despite direct invitations to suggest something electronic that

would be useful to them. Therefore, we concluded that the most appropriate electronic resources (if any) included:

- visual tours of common placement sites
- a site for sharing useful web resources
- ways to rehearse clinical examination skills
- mechanisms for students to gain feedback on their progress while on placement

Outcomes

Findings from this project further challenge existing assumptions about healthcare learning and work. While previous research has focused on improving healthcare students' preparation for clinical practice, our interview and survey responses indicated that much of what students learn is context-specific. Students were learning to practice through interaction with particular people (patients, qualified staff), objects (equipment), and environments (the specific ward or clinic where they were placed). Knowledge was being developed through participation and interaction in specific placement sites. In this way, our project provides further evidence that it is not possible to fully prepare students for clinical placements. A shift in thinking is needed, from a focus on preparation to a focus on the particular environments in which students learn.

If we are to make significant improvements to healthcare education, it is essential that we promote these new understandings to university faculty (educators, researchers, and technologists), clinical placement sites (educators, managers, other staff), as well as healthcare students. We have already succeeded in reaching some of these stakeholders. The research has been presented at two dissemination days in London (one in each year of the project), at two audiology conferences (British Academy of Audiology conferences 2011 & 2012), and at a conference aimed at encouraging student engagement (RAISE – Researching, Advancing, and Inspiring Student Engagement, 2012). A critique of literature on "preparedness" has also been completed and will be made available online.

Future plans for dissemination include a 1-page summary of the findings for research participants and a 3-hour workshop for staff and students in Leeds (November 29th, 2012). We also intend to publish two academic papers based on the findings from the project – 1 theoretical paper and 1 which will report the lessons learned. Our dissemination plan is in Appendix E.

We employed tried and tested qualitative data collection and analysis techniques in this project and would recommend similar methods for gaining rich descriptions of students and staff members' experiences.

Conclusions

The research conducted at Leeds indicated that early clinical placements were working well. Student interviewees valued opportunities to work with patients and professionals, to practice, and to learn from their mistakes. It was evident that an important part of early clinical practice was "learning how to learn". Students were learning how to gain access to patients, who to ask for help, and when to ask questions. They were also learning to "speak up" and that it was okay not to know everything and to make minor mistakes.

Challenges such as variation in practices were reported, however students appeared to have developed strategies to cope with these and indicated that they were well-supported by qualified staff. It was also evident that qualified staff helped students to feel part of the team, through small gestures such as introducing students and including them in team meetings, rotas, and shared meals.

In each profession, structural aspects of placements appeared to support students' learning. This was particularly the case in the undergraduate audiology programme, in which students undertook year long placements, attended placements on their own or in pairs, were afforded extra time for carrying out appointments, and were paid as NHS employees. Students indicated that these structures enhanced their

familiarity with the clinical environment and with staff, and enabled them to feel supported and valued by their audiology departments.

Interviews with healthcare educators also indicated that placements were working well. Although it is likely that staff interviewees were a particularly enthusiastic group, they gave the impression that students gained valuable opportunities to develop and were supported through new and challenging situations.

With regard to the ways that students participated on placement, staff and student interviewees' responses were remarkably similar. The only mismatch detected was the degree to which staff and students expected students to become involved. Students in all three professions expressed a desire to become involved, to contribute to clinical work, and to prove themselves as budding health professionals. However, it was evident that staff held lower expectations of students' participation in early placements. Staff didn't expect students to know too much or to make significant contributions to the work of the team. This was particularly the case in medicine and nursing, where students enter new placement sites frequently.

Across all three professions, a critical factor which appeared to facilitate learning was the students' degree of familiarity with the placement environment and staff. Staff interviewees indicated that students developed their abilities and confidence over time and through repeated contact with patients and professionals. Staff perceived that students benefited most from placements when they received individual attention and when they got to know staff well. Although it may not be possible to extend the length of placements or reduce student group sizes, interviewees pointed to simple ways in which students' placement experiences could be enhanced. Small things such as welcoming gestures, encouragement, reassurance, and praise appeared to have a large impact on students' feelings about placement, as well as their motivation to practice and develop.

Survey findings served to confirm rather than contradict earlier findings from the interviews. Audiology students' survey responses provided further evidence that audiology-specific structures support students' learning. Across professions, students appeared to feel most part of the team when they were actively involved in the work of the team and were contributing to patient care. Students encountered differences between university and clinical placement practices, but had developed a range of strategies to negotiate these differences. The survey indicated that students use friends and family for support rather than university supports when placements become challenging. Healthcare educators may wish to consider whether this strategy should be supported, or whether university supports should be improved.

The students who attended the resource groups in Leeds did not express a demand for new print-material or online placement resources. Instead, they indicated that it would be helpful for them to have face to face contact with more advanced students in their placement sites, or students who had been on placement in the same place the previous year. This contact would allow them opportunities to ask location-specific questions, such as where certain equipment is stored, who they should approach for help, or where they should park their cars. Furthermore, resource group participants expressed a preference for informal contact with other students as opposed to meetings which were organised and monitored by course staff.

Implications

The main implication of this project is that it provides further examples of the ways that healthcare work and learning is situated (context-specific) and sociomaterial (occurs through interaction with people and objects, see Fenwick et al. 2011). To date, much of healthcare education research and practice has assumed that students learn knowledge and skills in the university which they can later "transfer" into practice. Our research further highlighted the shortcomings of this way of thinking, because much of what students learned was dependent on the particular site where they were placed.

Rather than focusing on preparation, we recommend that healthcare educators and researchers consider the ways in which clinical placement interactions and environments can be improved. Fuller and Unwin (2004) have begun to distinguish between different types of professional learning environments, including ones that

are "expansive" and ones that are "restrictive". In moving this work forward, we suggest that educators and researchers consider what an expansive clinical learning environment might look like and how students can best be supported in context.

Future educational interventions and research should engage with recent workplace learning perspectives and take further account of the complexities of healthcare work and learning. Ethnographic methods such as fieldwork observation may be particularly helpful for enhancing our understanding of the sociomaterial aspects of healthcare practice.

Recommendations

- Nothing magical or high-tech is required to improve clinical placements
- Creating an "expansive" learning environment is key
- Offer chances to practice, ask questions, gain help
- Welcome students, include them as part of the team
- Consider length of placements (may be context-specific)

References

Bender, D. G. and Braziel, B. R. (2004) Interdisciplinary program designed to prepare student health professionals for the cultural aspects affecting medical service delivery in rural areas. *Internet Journal of Allied Health Sciences & Practice.* **2** (4) Available from http://ijahsp.nova.edu/articles/vol2num4/bender.htm

Berridge, E. J., Freeth, D., Sharpe, J. and Roberts, C. M. (2007) Bridging the gap: Supporting the transition from medical student to practicing doctor – a 2 week preparation programme after graduation. *Medical Teacher.* **29** (2-3), 119-127.

Bland, M. and Ousey, K. (2012) Preparing students to competently measure blood pressure in the real-world environment: A comparison between New Zealand and the United Kingdom. *Nurse Education in Practice.* **12** (1), 28-35.

Carson, S. (2010) Do student nurses within an undergraduate child health programme feel that the curriculum prepares them to deal with the death of a child? *Journal of Child Health Care.* **14** (4), 367-374.

Chenoweth, L., Pryor, J., Jeon, Y. and Hall-Pullin, ;L. (2004. Disability-specific preparation programme plays an important role in shaping students' attitudes towards disabilement and patients with disabilities. *Learning in Health & Social Care.* **3** (2), 83-91.

Chittenden, E. H., Henry, D., Saxena, V., Loeser, H. and O'Sullivan, P. S. (2009) Transitional clerkship: An experiential course based on workplace learning theory. *Academic Medicine.* **84** (7), 872-876.

Clendon, J. (2011) Enhancing preparation of undergraduate students for practice in older adult settings. *Contemporary Nurse.* **38** (1-2), 94-105.

Cooper, C., Taft, L. B. and Thelen, M. (2005) Preparing for practice: Students' reflections on their final clinical experience. *Journal of Professional Nursing.* **21** (5), 293-302.

Curtis, J. (2007) Working together: A joint initiative between academics and clinicians to prepare undergraduate nursing students to work in mental health settings. *International Journal of Mental Health Nursing.* **16** (4), 285-293.

Dare, A., Fancourt, N., Robinson, E., Wilkinson, T. and Bagg, W. (2009) Training the intern: The value of a pre-intern year in preparing students for practice. *Medical Teacher.* **31** (8), e345-350.

Eyal, L. and Cohen, R. (2006) Preparation for clinical practice: A survey of medical students' and graduates' perceptions of the effectiveness of their medical school curriculum. *Medical Teacher.* **28** (6), e162-70.

Fenwick, T., Edwards, R. and Sawchuk, P. (2011) Why sociomateriality in education? In *Emerging approaches to educational research: Tracing the socio-material* (pp. 1-17). Abingdon, UK: Routledge.

Fuller, A. and Unwin, L. (2004) Expansive learning environments: integrating organizational and personal development. In H. Rainbird, A. Fuller, and A. Munro (Eds.) *Workplace learning in context* (pp. 126-144). London, UK: Routledge.

Guillett, S. E. (2002) Preparing student nurses to provide home care for children with disabilities: A strength-based approach. *Home Health Care Management & Practice.* **15** (1), 47-58.

Gum, L. F. (2007) Studying nursing in a rural setting: Are students adequately supported and prepared for rural practice? A pilot study. *Rural & Remote Health.* **7** (1), 628.

Hager, P. and Hodkinson, P. (2009). Moving beyond the metaphor of transfer of learning. *British Educational Research Journal.* **35** (4), 619-638.

Happell, B. (2008a) The importance of clinical experience for mental health nursing – part 1: Undergraduate nursing students' attitudes, preparedness and satisfaction. *International Journal of Mental Health Nursing.***17** (5), 326-332.

Happell, B. (2008b) The importance of clinical experience for mental health nursing – part 2: Relationships between undergraduate nursing students' attitudes, preparedness, and satisfaction. *International Journal of Mental Health Nursing.* **17** (5), 333-340.
Hayward, K. S. and Weber, L. M. (2003) A community partnership to prepare nursing students to respond to domestic violence. *Nursing Forum.* **38** (3), 5-10.
Hodkinson, P., Biesta, G. and James, D. (2008) Understanding learning culturally: Overcoming the dualism between social and individual views of learning. *Vocations and Learning.* **1**(1), 27-47.
Hope, A., Garside, J. and Prescott, S. (2011) Rethinking theory and practice: Pre-registration student nurses experiences of simulation teaching and learning in the acquisition of clinical skills in preparation for practice. *Nurse Education Today.* **31** (7), 711-715.
Illing, J., Morrow, G., Kergon, C., Burford, B., Peile, E., Davies, C. et al. (2008) *How prepared are medical graduates to begin practice? A comparison of three diverse UK medical schools. Final report for the GMC Education Committee.* London: General Medical Council/Northern Deanery.
Kilminster, S., Zukas, M., Quinton, N. and Roberts, T. (2010) Learning practice? Exploring links between transitions and medical performance. *Journal of Health Organization and Management.* **24** (6), 556-570.
Kilminster, S., Zukas, M., Quinton, N. and Roberts, T. (2011) Preparedness is not enough: Understanding transitions as critically intensive learning periods. *Medical Education.* **45***,* 1006-1015.
Manias, E. and Bullock, S. (2002a) The educational preparation of undergraduate nursing students in pharmacology: Clinical nurses' perceptions and experiences of graduate nurses' medication knowledge. *International Journal of Nursing Studies.* **39** (8), 773-784.
Manias, E. and Bullock, S. (2002b) The educational preparation of undergraduate nursing students in pharmacology: Perceptions and experiences of lecturers and students. *International Journal of Nursing Studies.* **39** (7), 757-769.
Matheson, C. and Matheson, D. (2009) How well prepared are medical students for their first year as doctors? The views of consultants and specialist registrars in two teaching hospitals. *Postgraduate Medical Journal.* **85** (1009), 582-589.
Matheson, C. B., Matheson, D. J., Saunders, J. H. and Howarth, C. (2010) The views of doctors in their first year of medical practice on the lasting impact of a preparation for house officer course they undertook as final year medical students. *BMC Medical Education.* **10**, 48.
McLafferty, E., Dingwall, L. and Halkett, A. (2010) Using gaming workshops to prepare nursing students for caring for older people in clinical practice. *International Journal of Older People Nursing.* **5** (1), 51-60.
McNeil, B. J., Elfrink, V. L. and Pierce, S. T. (2004) Preparing students nurses, faculty and clinicians for 21st century informatics practice: Findings from a national survey of nursing education programs in the United States. *Studies in Health Technology & Informatics.* **107** (2), 903-907.
Naylor, R. A., Hollett, L. A., Catellvi, A., Valentine, R. J. and Scott, D. J. (2010) Preparing medical students to enter surgical residencies. *American Journal of Surgery.* **199** (1), 105-109.
O'Brien, B. C. and Poncelet, A. N. (2010) Transition to clerkship courses: Preparing students to enter the workplace. *Academic Medicine.* **85** (12), 1862-1869.
Pelling, S., Kalen, A., Hammar, M. and Wahlstrom, O. (2011) Preparation for becoming members of healthcare teams: Findings from a 5-year evaluation of a student interprofessional training ward. *Journal of Interprofessional Care.* **25** (5), 328-332.
Prince, K. J., Boshuizen, H. P., van der Vleuten, C. P. and Scherpbier, A. J. (2005) Students' opinions about their preparation for clinical practice. *Medical Education.* **39** (7), 704-712.
Richards, E. L., Simpson, V., Aaltonen, P., Krebs, L. and Davis, L: (2010) Public health nursing student home visit preparation: The role of simulation in increasing confidence. *Home Healthcare Nurse.* **28** (10), 631-638.
Ruth-Sahd, L. A., Schneider, M. A. and Strouse, A. (2011) Fostering cultural and interdisciplinary awareness with "low-tech" simulation in a fundamentals nursing course to prepare student nurses for critical care clinical rotations. *Dimensions of Critical Care Nursing.* **30** (5), 263-268.
Siu, M. W., Cheung, T. Y., Chiu, M. M., Kwok, T. Y., Choic, W. L., Lo. T. K. et al. (2010) The preparedness of Hong Kong medical students towards advance directives and end-of-life issues. *East Asian Archives or Psychiatry.* **20** (4), 155-162.
Valler-Jones, T. and Shinnick, A. (2005) Holding children for invasive procedures: Preparing student nurses. *Paediatric Nursing.* **17** (5), 20-22.
Vanleit, B. and Cubra, J. (2005) Student-developed problem-based learning cases: Preparing for rural healthcare practice. *Rural & Remote Health.* **5** (4), 399.

The Higher Education Academy
Innovation Way
York Science Park
Heslington
York YO10 5BR

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Tel: +44 (0)1904 717500
Fax: +44 (0)1904 717505