Migrant Construction Workers and Health & Safety Communication



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Migrant Construction Workers and Health & Safety Communication

Tutt, Dainty, Gibb, Pink – Loughborough University

EXECUTIVE SUMMARY

Introduction

The principal focus for this research was how site managers can best communicate essential health and safety information to non/low English speaking migrant workers and, vice versa, how migrant workers can effectively communicate with English speaking workers and managers about critical health and safety matters. The Loughborough work was part of a broader project funded by ConstructionSkills, with specific work by Glasgow Caledonian (Hare et al, 2009) to develop products to support the communication of health and safety knowledge between non/low English speaking construction workers and English speaking site managers.

This research analysed migrant worker and manager perspectives, understandings, everyday work practices and variable roles on site qualitatively using a range of ethnographic research methods to investigate how communication successfully takes place between migrant workers, their native co-workers and managers/supervisors in practice. These methods produced rich qualitative data offering an in-depth understanding of how communications actually already happen and of the existing forms of safe working practices that develop on-site that is not accessible though standard interview and focus group methods.

Thus, the findings and recommendations provided here are grounded in successful practice derived from industry which has demonstrably been shown to benefit migrant worker safety, health and welfare. They provide the basis for suggesting areas where employers and managers can make interventions to enable safe and healthy working.

Key Findings

- The **increasing prevalence of migrant construction workers** has formed a distinctive characteristic of the industry's labour market in recent years. Construction workers are at a higher risk of accidents than in any other industry in the UK. Health and safety strategies which acknowledge and respond to this emergent context are now urgently required.
- The **industry tend to focus on conveying key messages** from management to workers. This leads to a lack of attention on understanding relations and communications channels between and within different groups of workers.
- Employers have devised a wide range of innovative ways of communicating with workers with low levels of English. However, these lack consistency and similar initiatives can have different meanings within localised contexts.

- Effective site induction is crucial to ensuring that the right information is conveyed to migrant workers. However, reliance on standard training devices can hamper the appropriate site-specific knowledge being imparted to such workers. Moreover, improved ways of establishing whether the appropriate learning has taken place need to be devised. This suggests that local induction plans should be devised to augment existing standardised practices. Site inductions should not be relied upon as the sole vehicle for health and safety training.
- No matter how sophisticated the techniques for communicating with migrant workers, it is clear that a multiplicity of communication channels play out simultaneously within construction work. It is in understanding how formal mechanisms can complement these less formal channels that strategies for safe and healthy working can be derived.
- The roles of interpreter and translator are often informally established with little formal recognition for those taking on such responsibilities, and highly variable standards amongst those that undertake them. These roles should be formally recognised within the industry, with formalised qualifications to denote levels of ability and responsibility.
- Mechanisms for benchmarking health and safety performance have proven effective in embedding a culture of safe and healthy working which is readily understood by migrant workers and their indigenous counterparts.
- Methods for improving communication are likely to be underutilised unless they are delivered in a way which is sensitive to the workers on site and the stigma which can be attached to poor language abilities and to health and safety issues more generally. Thus, the method and context of delivery of support for migrant workers is often as important as the messages that employers seek to convey.
- Efforts must be made to **ensure that migrant workers understand their rights and obligations** under health and safety law. Encouraging the open reporting of hazards and 'near misses' forms a crucial aspect of encouraging dialogue on such issues.
- The **provision of English language training**, delivered in a way which is sensitive to worker needs, is an effective way of demonstrating a commitment to migrant workers and of ensuring their understanding of key health, safety and welfare information.
- Ensuring a fair and equitable workplace for all workers, regardless of their ethnic background, remains a challenge on many sites. Efforts as closing down racism in the form of banter, graffiti and other actions must be sustained as part of wider efforts to ensure the better integration of migrant workers.
- Notwithstanding the need to establish transferable practices which could have benefits across different site contexts, it is important to recognise that migrant workers develop their own ways of safe working which are often grounded within their own experiences and work cultures. Whilst these may be enacted differently within different contexts, it is incumbent on employers to ensure that such approaches are allowed to co-exist beside formalised health and safety mechanisms.

RECOMMENDATIONS

1. Context: acknowledging migrant workers' existing communication channels

Identifying 'good' practice for improving migrant worker health and safety is not as clear-cut as delineating fluent English-speaking and Non-English speaking teams or workers, as there can be a multitude of communication channels underpinning the successful functioning of the team as a whole. It is important to acknowledge migrant workers' existing communication channels. Accordingly, all of the recommendations have been designed in such a way as to promote localised interpretation and enactment rather than an as a normative framework. They have also been devised in such a way as to integrate with the establishment of a positive health and safety culture more generally.

2. Refining the site induction process

Health and safety inputs provided during the site induction process are crucial, and yet there is a high level of variability in terms of how this is delivered and its effectiveness as a route to ensuring safer working. The somewhat conflicting induction roles of training and briefing should be identified and clearly differentiated, with training elements removed to a more suitable opportunity where possible. It is critical that safeguards are put into place that ensure all migrant construction workers receive adequate training *before* they begin work and employers must be clear regarding the role of the induction in delivering aspects of this training. Workers need to be made are aware of what to expect in terms of the *delivery*, *format*, and *contents* of the site induction. It is also important that new methods of induction are developed which acknowledge how knowledge is transmitted in practice in order to respond to site specific environments and worker needs.

3. Promoting an open health and safety culture

It was clear that considerable stigma is attached to the open discussion of health and safety issues which is reinforced by construction site culture and 'macho' attitudes which pervade site-based work. It is essential therefore, that employers develop strategies to dissuade workers from thinking that reporting accidents will put their jobs at risk and encourage an open dialogue around risks and hazards in the workplace. Opportunities through which migrant workers can become more actively engaged in propagating safe and healthy working practices and informed of their rights and responsibilities should be developed.

4. Reinforcing and maintaining a safe working culture

Our research has revealed many approaches which can help to reinforce open communication channels, convey safety information and promote continued awareness of hazards in the workplace. These measures should be constructed in such a way as to be mutually reinforcing. Their effectiveness should also be regularly audited to ensure that they continue to reinforce key messages. Of the practices identified, finding ways to standardise the visual information displayed on hard hats and other PPE could be an important step in improving a basic health and safety communication channel between site managers and migrant workers.

5. Avoiding or minimising racism

Closing down unwanted communication channels such as racist banter or graffiti, and bonding multi-racial teams of workers together, is clearly beneficial for maintaining effective communication networks throughout a construction project. Opportunities for more inter-racial association, for example in a sporting or social environment, should be sought as this leads to improved communication and racial tolerance.

6. Providing English language training and support

English language training is clearly a productive way to target and support workers with low English language skills and to gradually improve the communication channels between migrant workers and site managers. However, care should be taken developing appropriate, attractive and accessible courses. These should be run at times which optimise the workers' capacity to learn and which reflect the different learning styles of such workers. Providing different levels of English tuition is particularly important given the varying levels of ability apparent even within closely knit single-nationality work groups. Where a project is not large enough to warrant its own English language training, grouping together with other employers within a locality offers an alternative way to demonstrate a commitment to facilitating the better integration of such workers into the industry.

7. Recognising the role of translators and interpreters

Translators and interpreters play a key role in enabling communication between migrant workers and their indigenous counterparts. Official recognition of the practices of translation and interpretation is needed, especially in terms of formalising this role on site. A scheme to assess language translation and interpretation skills would be beneficial both for contractors, to provide a knowledgebase of the language skills and competencies of migrant workers, and for better acknowledging the skills set and enhancing the career path of migrant workers in construction. The role of outreach workers should also be further explored.

Recommendations for further research

Ethnographic research enables otherwise inaccessible in-depth understandings of on-site realities. This has enabled us to identify areas which require further investigation if good intentions are to be translated into effective practice:

- A further programme of research dedicated to better understanding the induction experience 'on the ground' is needed. This would draw out existing good practice, with a focus on more innovative and informal measures. This will generate new knowledge on this most critical moment of time in which to communicate health and safety issues and will lead to the design and testing of context sensitive induction techniques.
- A number of existing visual and interactive communication media that have already been designed and are in place on sites are as yet not being effectively used by construction workers themselves. A programme of ethnographic action research should be developed to investigate and evaluate ways in which these could be used effectively.

• The roles of interpreters and translators on site are unregulated and so their possible impact is uncertain. Given the crucial importance of both functions to enabling safe and healthy working, research should be undertaken to establish standards, appropriate levels of responsibility and reward for those taking on such roles.

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INTRODUCTION

The increasing prevalence of migrant construction workers has formed a distinctive characteristic of the industry's labour market in recent years. Although Labour Force Survey statistics suggest migrant worker representation of 2.38% (see McKay et al, 2006: 24), these official figures almost certainly underestimate the representation of such workers given the lack of regulation in the sector. For example, some commentators have highlighted the problems of identifying migrant workers who are self-employed (Balch et al. 2004) or undeclared (Cremers and Janssen 2006). Based on interviews with unions and employer associations, Lillie and Greer (2007) estimate the share of migrants to be as high as 10%. Although the economic downturn within the sector may have tempered growth in the numbers of migrant workers entering within the sector, free movement of labour from Eastern Europe is likely to maintain the numbers of workers with limited English language ability at higher levels than in the recent past.

Construction workers are already at a higher risk of accidents than in any other industry in the UK (Craw *et al.* 2007), and the large influx of workers from Eastern European countries is presenting considerable additional challenges to employers' efforts to manage health and safety. According to a recent report by Irwin Mitchell and the Centre for Corporate Accountability (2009) in 2007/8 a disproportionate number of migrant workers were killed in work-related accidents. In construction the situation was found to be particularly acute; almost a fifth (17%) of all recorded construction deaths involved migrant workers in 2007/8, this despite estimates for the number of migrant construction workers equating to around 2.4% of construction workers. Migrant worker deaths in construction accounted for 66% of all migrant worker deaths according to the report.

Despite concerns over migrant worker deaths, there is a paucity of detailed research into the health, safety and welfare issues associated with such a rapid increase in migrant labour specifically. Moreover, there is currently little robust evidence of the specific health and safety challenges that the influx of migrant workers presents and how such challenges might be mitigated. The focus of our research was on how communication already does and might further take place within a multi-cultural workforce with varied levels of English language skills. Specific attention is paid to Polish, Russian and Romanian workers and the groups which are most highly represented according to ConstructionSkills figures.

In this study we have generated ethnographic data about the communication practices which construction workers are already engaging in, whether they vary amongst migrant groups, and the social relations and group dynamics of workers on construction sites. We have both evaluated existing common practices onsite and outlined the attempts to develop fresh approaches to improve communication of health and safety which we encountered during our research. We examine the strategies that have already been developed in practice, how successful they have been, and whether they might form the basis of recommendations for improving future practice. Thus, the recommendations provided here are grounded in successful practice derived from industry which has demonstrably shown to benefit migrant worker safety, health and welfare. Whilst we cannot lay claim to their generalisability beyond the specific contexts within which they were observed, they do provide the basis for suggesting areas where employers and managers can make interventions to enable safe and healthy working.

The principal concern for our research was in how site managers can best communicate essential health and safety information to non/low English speaking migrant workers and, vice versa, how migrant workers can effectively communicate with English speaking workers and managers about critical health and safety matters. The Loughborough work was part of a broader project funded by ConstructionSkills, with specific work by Glasgow Caledonian (Hare et al, 2009) to develop products to support the communication of health and safety knowledge between non/low English speaking construction workers and English speaking site managers.

This summary research report includes analysis of our data and findings, as well as recommendations for developing both existing and new products and schemes. Identified good practice is illustrated through three case studies integrated within this report – on Site Inductions, Team Work & Communication, and Interpreter & Translator Roles on site – which demonstrate how some of the issues discussed within this report play out in practice.

RESEARCH METHODS

Our research project set out to analyse migrant worker and manager perspectives, understandings, everyday work practices and variable roles on site qualitatively. This involved using a range of ethnographic research methods as appropriate to investigate how communication successfully takes place between migrant workers, their native co-workers and managers/supervisors in practice. Using these methods we were able to produce rich qualitative data that offers an in-depth understanding of how communications actually already happen and of the existing forms of safe working practices that develop on-site that is not accessible though standard interview and focus group methods.

Our ethnographic research covered ten different construction sites across the UK. We targeted different types of projects run by large, small and medium-sized contractors. The qualitative research methods employed during the project depended on the opportunities and emergent phenomena on each site, but included combinations of: 'shadowing'/ intensive study of workers; participant observation of workers at key areas on site (such as site inductions, canteens, sites of specific trades); recorded formal interviews with health and safety managers/directors and site managers; informal interviews with migrant workers and co-workers; material data collection of hazard report cards, site safety books, photographs and other visual data (e.g. work activity, signs, site safety league tables).

We made several return visits to five construction sites during three months of fieldwork which enabled different kinds of access, ranging from regularly shadowing workers on site, to being limited to site inductions and canteens, or pre-arranged interviews. Relationships developed with key figures ('gatekeepers') on site, who became invaluable for our continued, repeat visits and participant observation. It was often useful to first map out the formal structure of site communication along chains of command from the top down.

We did not want to impose a predetermined generalisation of how communication operates among gangs on site without meeting the individual workers and getting an understanding of the daily work practice within their team. Therefore, it was decided to

spend intensive periods of time with specific groups of workers and individuals within those groups to gain a closer understanding of the communication channels available to these migrant construction workers and how they operate in practice. Through this approach we were able to gain an understanding of workers' own understandings and views of their work and communication practices, of the different ways that group dynamics develop *and* to analyse the principles through which communication processes might be understood across the groups studied.

As our construction site ethnography was both multi-sited and comparatively short-term, we focused on a set of concrete case studies. These generated understandings of communication practices both comparably across sites, and specifically of how knowledge and practices developed amongst particular groups of workers on particular sites. Site inductions for migrant workers were compared across sites, and we analysed case studies in the specifics of communications amongst multicultural groups of workers, and the (informal/ semi-formalised) roles of working interpreters and translators on site.

Visual research methods were particularly important in allowing us to develop routes into understanding worker's own perspectives. The use of photographs of one group in action – including images taken by a curtainwall installer to identify his key contacts and his view of the workers at ground level – proved a highly useful research tool which permitted later discussion with key informants and proved valuable in revealing the dynamics of this work group, as based on effective communication and co-ordination of tasks. This is an established approach which could prove useful in future studies in this area. Ethnographic accounts, drawing on our field notes, elaborated with description and interview quotes, are also used in the case studies within the report to help explore the culture.

MAIN FINDINGS AND RECOMMENDATIONS

Refining the site induction process

The provision of information, training, induction, translation and supervision are all key requirements of the health and safety legislation. Yet, for new migrant workers, health and safety training is more likely to be limited to training at induction and often is not understood and communicated effectively (Mckay et al., 2006: 139). Furthermore, the somewhat conflicting induction roles of training and briefing are not well understood and often conflated and confused. Provisional findings from a study of recent deaths of migrant workers on construction sites (between April 2005 – March 2008) puts extra weight on the absolute necessity of communicating critical health and safety and site specific information. Of the sixteen 'vulnerable' workers killed during this period, in four cases the fatal accident occurred on the first day of work, and in a further three cases it happened on days two to five. Eight were killed in the first ten days of work with at least 55% having had no construction work experience (ConstructionSkills, 2008).

The site induction is clearly a critical opportunity to assess the communication skills of non/low English speaking construction workers and English speaking site managers. Small-scale ethnographic investigation has been undertaken into the induction process at a number of major contractors, privately owned and smaller construction firms.

Our research suggests that, whilst most major contractors are making a concerted effort to ensure health and safety induction resources and materials are up to date and shared around their sites, including the sharing of translated instructions and signage, there is not the same quality control, or standardisation, in terms of the delivery and format of the induction 'on the ground'. As such, the migrant worker experience of site induction can vary vastly from contractor to contractor, site to site, and convener to convener.



This can include the quality and contents of health and safety (and site specific) details differing widely even on the same site. Inductions are taken by union reps (in health and safety roles), health & safety managers, qualified supervisors and trainees, working in different time-frames and putting different emphases on (and contents into) their induction. Other research at Loughborough has also identified the conflicting objectives of training and briefing in site inductions.

This ethnographic research across UK construction sites also frequently revealed that vulnerable workers, with low-level understanding and communication of English language are (at least initially) slipping through inductions undetected. In practice, the site induction was often revealed to be a case of temporarily striking a balance between 'putting them all through' quickly and efficiently, and of wasting time by having to re-do (in a different language) the induction for workers. The worst case scenario is of not picking up the communication issue at all, and failing to communicate critical health and safety messages:

"[Y]ou're told by a supervisor, sometimes that, you know, "okay, put them all through" – and I've done a lot of inductions – you sit there and you've got people nodding, and then you say "did you understand that" and everyone nods, and then when you come round and you actually talk to the individual people – which I always do in inductions – you find that people can't speak English. You then have to finish the induction, go and find a supervisor, bring them back in, bring in the interpreter, redo the induction for those people."

(Project Manager, Major Contractor)

The head nodding is actually an important point. For example, this practice is described by migrant workers in McKay et al's (2006) study, "with so poor English that they barely can understand what he's going on about, but *they're smart enough to know when to nod*, they see their friends signing, and they're signing, induction is done, he starts working" (McKay, Craw & Chopra, 2006: 176). It was also not uncommon for two-page work and medical forms to be handed out for completion *during* the induction video and/or presentation, splitting the attention of inductees, many of whom did not have English as a first language, such as the following experience recounted through this ethnographic tale:

After starting the playback of the HSE video, the inductor hands two-sided forms (security and medical) out around the table, with the details needed for work to be filled in while the video played. I am conscious that the person whom I'm sat beside is looking at me while I fill in the form. He has, in fact, been waiting for me to finish the form and gestures towards my pen. I ask him if he wants to borrow it and he answers "yes". In discussion later, I find he is Polish and has little spoken English skill. Alongside his limited comprehension of the video – with attention split or focused on the form – and cautious of engaging in conversation, the worker was also waiting for the right moment to borrow a pen in order to fulfil the task.

On the other hand, effective, innovative (and often informal) measures and practices are being developed to communicate health and safety information successfully and to "pick up those people, vulnerable people that do need the help" (Head of health & safety, Major Contractor). Our small-scale investigation hints that such practices include conveners' engaging individually in informal conversation prior to beginning the real 'work' of the induction: "very, very quickly you pick up whether or not they understand" (Health & safety manager, Major Contractor). A Polish foreman, at a medium sized contractor, had a role of sitting in (and listening to) inductions to identify struggling workers, as well as using simple short spoken quizzes. He describes a process of having to "weed out" Polish workers who could not read or understand any spoken English, with a failure to understand basic safety signs being the "last resort". While the covert practice (of using a 'mole') at the beginning of the induction could be deemed ethically controversial, the overall process of making inductions more interactive and collaborative – in terms of a 'back and forth' of questions – should be encouraged.

ConstructionSkills offer a number of products to support staff in carrying out inductions with migrant workers, including courses through the National Construction College and the *Kickstart* site induction CD-ROM to help deliver multilingual information about construction site safety. While Dainty et al. (2007: 48) in their report for the Institution of

Civil Engineers, call for training supervisors and induction teams to "improve their cultural awareness and competence in communicating to migrant workers".

Recommendations Refining the site induction process

Health and safety inputs provided during the site induction process are crucial, and yet there is a high level of variability in terms of how this is delivered and its effectiveness as a route to ensuring safer working (Dainty et al., 2007: 45).

The somewhat conflicting induction roles of training and briefing should be identified and clearly differentiated, with training elements removed to a more suitable opportunity where possible. It is critical that safeguards are put into place that ensure all migrant construction workers receive adequate training *before* they begin work and employers must be clear regarding the role of the induction in delivering aspects of this training.

Workers need to be made are aware of what to expect in terms of the *delivery, format,* and *contents* of the site induction. It is also important that new methods of induction are developed which acknowledge how knowledge is transmitted in practice in order to respond to site specific environments and worker needs.

A further programme of research dedicated to better understanding the induction experience 'on the ground' is also needed. This would draw out existing good practice, with a focus on more innovative and informal measures. This will help generate new knowledge on this most critical moment of time in which to communicate health and safety issues and recommend the best ways to distribute this new knowledge.

Promoting an open health and safety culture

Promoting a positive, open health and safety culture with direct involvement of workers is an essential aspect of addressing the challenges posed by construction projects, no more so than the challenges involved in employing workers with little or no English language skills.

Health and safety culture is a large and complex area and a full consideration is outside the scope of this report. Notwithstanding, a number of examples and techniques were observed that have an effect on this culture.

Site safety tables and warning systems

Monthly site safety league tables are often situated by the entrance to construction sites and, as such, are the project's public, 'front-of-stage' display. They are usually managed by the major contractor using factors such as a "risk rate matrix" (differentiating between high risk and low risk trades) and the number of workers employed, which inevitably influence the incidence of accidents onsite, although some of the categories we came across involved more subjective assessment, such as that of the 'attitude' of the workers. Using internationally understood strategies such as league tables may enhance migrant workers' understanding of the importance of health and safety.

	1	Site Safety League Table					Total	Task / Target for This Month
	Consta	No of Personnel co Site	General Site Subety	House Keeping Score	CSCS/ Training Score	Attitude & Innovation Score	Score	
		3)	Score	10	100%	10	100%	EXCEPTIONAL/EXAMILE TO OTHERS
	HI Earlerk	10	9	9	100%	10	94 %	GOOD ALLLOUND - KEEP UP GOOD WORK
	Riviola Idal	2	9	9	100%	9	92%	NICE CRANE ! - WNOVATINE APPROACH
ATAT	-	4 10	5	9	100%	8	88%	
		5	9	8	100%	8	0.	(00) EFFORT
		+-	8	8	100%	9	84-%	HWIEKEEPING COULD BE IMPROVED
	ALL ALL		6/2	9	100%	8		
and and the	A LA LAND		+ / -+	1-1-	100%	7	84%	SAFE OFFLOAD SYSTEM NEEDED
	and	ALL BR	6	F	1007.	8	82%	LET DOWN BY POOL ACCESS CANDLES
XIL	N	and in	- Children	0	100%	6	80%	HOUSEKEED ACCESS CLARKE
			all all	2ª		6	74%	HOUSEREEPAIS TO SE IMPROVED

When successful, these tables effectively communicate the success of a team as a whole (through the league format) and generate team-based competition among the trades, with contractors often awarding the winning team by paying for a social/communal activity. For example, one contractor funded the 'top performing' subcontractor £250 for paintballing and a night out aimed at further bonding of the team.

In terms of effective communication, highly visible tables are also used by some contractors as deterrents, as well as for promoting good practice.

At a medium-sized contractor's project, a 'Two Card System' (of red and yellow cards) was displayed at the site office door. During our on-site research, a red card (and dismissal from site) was issued to a worker for not wearing safety goggles when working with steel, and this received a lot of attention. Based on the 'universal language of football', in such examples the format and consequences of poor health and safety was easily understood by workers with low English language skills. It is important to recognise, however, that migrant workers had also developed their own ways of safe working which might not be reflected by the practices easily assessed by such schemes. The potential unintended consequences of rewarding or penalising specific types of safety practice should therefore, be examined through further on-site ethnographic research for their systemic implications for site safety culture.

Hazard report cards

Various 'card' systems were in place on the sites visited, including 'suggestion' schemes and 'hazard identification' schemes. The main drive behind the operation of hazard report card systems by contractors is incentivise the reporting of 'near misses¹' as a learning tool. Despite the scepticism voiced by some trades union representatives during the research that there may be a quota to fill in so many cards per week, this system offers another communication channel between site managers and migrant workers.

¹ 'Near Miss' or 'Near Hit' – an incident which could have resulted in an accident but didn't



It can be seen as a means of building trust between the workforce and management, as well as providing safety data and behaviour patterns for future action. One site had a return of two hundred cards in just over four months.

Some sites have provided boxes and cards in Polish, to encourage migrant workers to enter into the scheme. As with the case of translated signs, using different boxes for all the languages present on site would not be practical where there are many different nationalities of migrant workers. Another reported issue, which can discourage the effective take up of such schemes, is that migrant workers and many indigenous UK construction workers can often be reluctant or embarrassed about writing on the cards because of their concerns about their writing ability.

Adding to this problem are the mixed messages about why and when these cards should be filled in. The message behind the hazard card schemes differs across sites and contractors with the potential to confuse migrant workers who move between jobs frequently. Consider the differences between two such schemes. One contractor uses the tag-line "You see it >> you record it >> you post it >> we deal with it", pushing the message that management will be made accountable for (failing to act on) reported near misses. While the 'Near Miss Card' system operated by another contractor informs workers with the slogan: "See this [bad practice] >> report it >> use this". The health and safety manager for this contractor stressed that the main message should be *don't walk by*, explaining in an interview: "Fix it yourself, alert supervisor to fix it, and if you feel that it's not being dealt with go higher." There needs to be clarity about when hazard report cards should be used to report incidents, in addition to reporting incidents face-to-face. This is particularly important for migrant workers who, with little experience of the UK construction industry, can often believe that reporting or even communicating such messages to personnel above their supervisor may risk them losing their job.

Recommendations Promoting an open health and safety culture

It was clear that considerable stigma is attached to the open discussion of health and safety issues which is reinforced by construction site culture and 'macho' attitudes which pervade site-based work. It is essential therefore, that employers develop strategies to dissuade workers from thinking that reporting accidents will put their jobs at risk and encourage an open dialogue around risks and hazards in the workplace. Opportunities through which migrant workers can become more actively engaged in propagating safe and healthy working practices and informed of their rights and responsibilities should be developed.

Reinforcing and maintaining a safe working culture

Management strategies for reinforcing and maintaining a safe and healthy working culture were observed and highlighted in our desk study and field work with a particular focus on communication channels.

Establishing effective ways to communicate with those with low levels of English language ability clearly represents one of the core challenges. Our research revealed a range of innovative and effective mechanisms for helping to convey information using a variety of visual media:

Coloured hard hats

Colour schemes for hard hats can be a simple way to communicate the different responsibilities, skills and positions held by the workers onsite. Consider the scene below in which a migrant worker, or any member of the site team with a familiarity of the colour scheme, can quickly identify the manager (black), the supervisors (white), the banksman (orange), and the general workers (blue).



Difficulties arise in the lack of standardisation of the meaning of colours across different contractors and projects. This can also occur on the same project on the occasions when subcontracted firms are required to provide their own personal protective equipment (PPE), which often clashes with the colour scheme operating onsite. For migrant workers particularly, who can move frequently between projects and contractors, what could be an effective visual (non-language based) means of communication can become a very confused set of messages.

The same applies to other information being communicated through helmets and clothing. Different contractors have developed varying strategies to identity the language skills of workers. For example, one major contractor gets workers to "wear a sticker of the flag of the country whose language they can interpret into on their hard hat", and a worker who does not speak English will have an English flag on their hard hat with a black cross marked on it. However, on other contractor sites, flags can be used to identify the country of origin (and native language) of the migrant worker. Again mixed messages work against the overall effect. There is also the risk of overloading the information on hard hats, with the first aid sign and emergency phone numbers being other messages communicated in this way across sites.

Finding ways to standardise the visual information displayed on hard hats and other PPE could be an important step in improving a basic health and safety communication channel between site managers and migrant workers.

Note: See the later recommendations in relation to interpreter and translator roles onsite.

Sign translation and TalkSign

Construction site signage should comply with EC Safety Sign Directive (92/58/EEC), comprising a pictogram plus written information. The policy of some major contractors states that where a single language equals at least 5% of the workforce, signs are meant to be translated into that language, but we found no evidence of this policy being implemented on the sites encountered during our research. Such practice is also impractical on sites (particularly in London) where several languages would fall into this category, needing a multitude of messages or multiple signs to convey this health and safety information. Health and safety managers and directors' explanations for this absence ranged from not wanting to "marginalise the British worker", to claims that migrant workers do not pay attention to them after the novelty of having signs in their native language wears off. Where health and safety information was translated, it was often featured on information about minimising slips and trips on site.

Translated signage, placed beside an English language sign, was effectively employed by some contractors where there was a majority nationality of the migrant workers on site. The Polish sign below, for example, was used to convey a simple message not easily discernable from the colour-coded walkways alone, due to the rapidly changing nature of the site layout.





During our research we took note of new strategies being trialled, and new channels communication being experimented with, which aimed at improving the communication of health and safety information between site managers and migrant workers. One approach, developed through the safety manager on a major contractor's site, was the use of 'TalkSign'. By touching the buttons an explanation of each sign is 'spoken' in the chosen language, including Polish and Russian. This can be seen as an access point for signage and a reference tool for critical H&S info onsite. The sign board is described as providing "information on the standard health and safety signage you will encounter and are required to know whilst working safely onsite".

However, at the time of our visit, there was only one board on this site which did not seem to be well used, with the 'stigma' of use – a loud 'voice' broadcast in the corridor beside the site entrance door – also described as an issue. Employers should be aware of the potential stigma attached to a worker admitting poor English language skills by accessing certain aids.

As with the social shaping of new technologies in general, there is perhaps scope for use of the TalkSign as a reference tool in a different context, such as by induction conveners to clarify words and phrases in different languages (as well as vice versa) during site inductions.

Recommendations

Reinforcing and maintaining a safe working culture

Our research has revealed many approaches which can help to reinforce open communication channels, convey safety information and promote continued awareness of hazards in the workplace. These measures should be constructed in such a way as to be mutually reinforcing. Their effectiveness should also be regularly audited to ensure that they continue to reinforce key messages. Of the practices identified, finding ways to standardise the visual information displayed on hard hats and other PPE could be an important step in improving a basic health and safety communication channel between site managers and migrant workers.

A number of existing visual and interactive communication media that have already been designed and are in place on sites are, as yet, not being effectively used by construction workers themselves. A programme of ethnographic action research should be developed to investigate and evaluate ways in which these could be used effectively.

Avoiding or minimising racism

Unwanted communication channels

Most major contractors admitted that racial tensions among the workforce are common on construction sites. Racist graffiti in communal areas, such as the toilets, was often identified as something which can quickly grow into a major issue. One large major contractor project had worked particularly hard to break down these tensions. The health and safety manager explained how graffiti in the site toilets had been started by a small minority, but "once it's started, lots of people join on the bandwagon". Graffiti was flagged as a major flash-point on this site, and an unpleasant and less-typical communication channel, which prompted a number of reactive social strategies being put into place.

To close down this unwanted communication channel, anti-graffiti painting was undertaken throughout the site at considerable cost. Management catalogued personalised racist graffiti, 'political grudges', conflict between British and East European, and Muslim workers, and also between different East European workers. Strategies put into place included a mixed ethnic football match series on Wednesdays, which drew big crowds, families and friends, and on one occasion, 28 substitutes per team! The matches were deliberately structured to mix the workforce together – with a trades union rep referee, a Polish manager and English manager, and mixed teams. The games were the dominant topic of discussion during our site visits. These efforts also seemed to have invoked a culture shift in that, unlike the majority of projects we encountered, the site staff (from managers through to general workers) were very open about racial clashes, as well as being proactive about ways to solve them.

Closing down unwanted (racist) communication channels, and bonding multi-racial teams of workers together, is clearly beneficial for maintaining effective communication networks throughout a construction project.

Recommendations Avoiding or minimising racism

Closing down unwanted communication channels such as racist banter or graffiti, and bonding multi-racial teams of workers together, is clearly beneficial for maintaining effective communication networks throughout a construction project. Unwanted communication channels such as racist graffiti should be rigorously controlled as its affect on migrant workers may be more significant than for indigenous workers, irrespective of their ethnicity. Opportunities for more inter-racial association, for example in a sporting or social environment, should be sought as this leads to improved communication and racial tolerance.

Providing English language training and support

English language classes & Outreach Worker programmes

Schemes to teach English language (with special units on construction) were fairly common on large sites run by larger contractors, although few were maintained through the life of the construction project. For example, one large project ran three series of language classes (basic – intermediate) which were funded by the major contractor and 'second-tier contractors', held at 5pm on Tuesdays and Thursdays for two hours. They were initially well attended (50 people over three language classes), but were cancelled when attendance tailed off. The temporal involvement of operatives within most projects may have an impact here. Maintaining a sustained interest in such programmes by their continued promotion is clearly important.

Finding funding for such language programmes is difficult, by the admission of the site manager on the project mentioned, as there is little interest in GCSE level education for workers, with industry interest focused specifically on English as a method of communication (to benefit construction work). The health & safety manager also spoke of the difficulty of motivating workers for courses (often situated off site). He described how workers tired after a long shift would have to carry on for at least an extra hour, and that many workers are not used to learning in such an environment, with travelling also a disincentive.

We did encounter a pilot language training scheme in which a major contractor, in partnership with the trades union and an FE college, provided free support to those trade-contractors employing non-English speaking employees (funded by the European Social Fund and Local Skills Councils). This included English language training, preparation to sit the ConstructionSkills Health & Safety Test, and translation of method statements and risk assessments. We met Polish workers on a major contractor site who attended these courses, run for 2 hours per week at agreed times over 8 weeks.

English language training is clearly a productive way to target and support workers with low English language skills and to gradually improve the communication channels between migrant workers and site managers. But funding for such schemes can be difficult and ranges greatly between different councils and contractors. Providing training to approve language skills is seen as very helpful, but care should be taken developing appropriate, attractive and accessible courses which respond to the needs of workers who are already working long hours.

Introducing 'outreach workers' onsite (with foreign language skills) was another experimental strategy during our period of research. Such schemes can provide migrant workers with the opportunity "just to have someone onsite that they feel comfortable speaking to", which can help the industry better understand cultural differences and crucially help break-down migrant workers' typical reluctance to engage in dialogue with site management or the trades union. As the Head of health & safety, for a major contractor trialling such a scheme, explains:

"At least with the UK workers, they always know that they've got the Health and Safety Executive. They pretty much know their rights because of their links with the unions, so that, actually, they know that if they raise an issue and they did get the sack for it, they know they've got some rights and they can stand up for themselves. So part of the role of the outreach worker as well, will be to say to these guys, you know, just because Mr Big Contractor or your supervisor says "its okay to tell me – I won't sack you", actually you've got some rights as well behind it in British law that protect you."

The HSE has been involved in a pilot exercise using outreach workers as part of their research into accidents to vulnerable workers in construction. This provides a new means to access migrant worker groups in construction in London, and to communicate general health and safety awareness messages. However the longevity and scope for implementing such programmes nationwide may prove difficult, and is likely to depend on the contractors funding these schemes being able to see a direct 'payoff' within their construction projects. This is even less likely to occur in the current difficult economic environment.

Recommendations Providing English language training and support

It is clear that many workers now operating within the UK construction sector possess low levels of English ability. English language training is clearly a productive way to target and support workers with low English language skills and to gradually improve the communication channels between migrant workers and site managers. However, care should be taken developing appropriate, attractive and accessible courses. These should be run at times which optimise the workers' capacity to learn and which reflect the different learning styles of such workers. Providing different levels of English tuition is particularly important given the varying levels of ability apparent even within closely knit single-nationality work groups. Where a project is not large enough to warrant its own English language training, grouping together with other employers within a locality offers an alternative way to demonstrate a commitment to facilitating the better integration of such workers into the industry.

Recognising the role of translators and interpreters

Interpreter and translator roles on site

Our ethnographic research identified informal interpreters and translators on site as providing a crucial communication channel between the site manager and migrant workers. The terms 'translate' and 'interpret' are often used interchangeably in everyday, non-technical language, but formal translation (written) and interpretation (oral) work are highly skilled and regulated professions. While our team does not have language expertise, we found there to be little distinction between the two skills in practice on the construction sites we visited, with the same person often drafted in to do both jobs, meaning that there is a blurring of categories and a lack of appreciation of the different skill-sets. Consider also the host of different requirements within each role. For instance, the different skills involved in simultaneous interpreting (when the message is communicated in the target language as quickly as can be formulated) and consecutive interpreting (speaking after the source-language speaker has finished speaking), or between onsite interpreting (in person) and telephone interpreting.

Most major contractors attempt to implement a ratio (typically '1-to-4') of working interpreters to 'non-English speakers', which is linked back to the *Management of Health*

and Safety at Work Regulations 1999. The guidelines in place for ensuring adequate communication of health and safety information for migrant workers also do not make this distinction (correctly), such as in the guidance of one large contractor, which requires all trade contractors to "confirm ratio of 1 translator/4 non–English speakers" prior to arrival. In practice, this often means that the major contractor requires *trade-contractors* to ensure that a good English language speaker is available to interpret for every four non-English speakers, but in reality this cannot always be enforced on site. This is because the '1' is also busy with their own trade work and may be called to work elsewhere. In this sense, the 'interpreter' and 'gang' are both highly fragmentary and transitory concepts given the changing work-demands and mobility of everyone during the course of a week, a day or even an hour.

Most health and safety managers recognise this reality and describe how migrant workers facing a problem in such situations would seek help through a supervisor. If language problems are not easily solved through this alternative communication channel, then it is assumed that the supervisor will know how to act accordingly and find somebody else along the chain to solve the emergent issues:

"The supervisor knows where the interpreters are. The supervisor will know who the guy works for – he's got a "Subcontractor A" hat on or a "Subcontractor B" hat on – generally the supervisors know who the guys are working for and... erm... if they don't they can quickly find out." (Health and safety manager, major contractor)

Such interpreters are typically sourced on the project through agency and subcontractor staff, as a health and safety manager at a major contractor site explains:

"We haven't got no interpreters. We haven't got guys working for [the contractor] that can speak languages. We wouldn't employ labour from [an agency] if they didn't speak English."

A health and safety manager, whose job involves liaising between the trade contractor managers, supervisors and foremen responsible for the Romanian workers on site, describes the selection of workers for this communication role on his large major contractor development, with the two skills again being conflated: .

"We have here two or three foremen on the project who have been in the UK for like eight, nine years. Their English is very good, their terminology – construction terminology – is good. ... Trade contractors do have Romanians well established in their organisations... [T]alking to them via health and safety meetings and discussing it in English as well as Romanian, you realise that that guy, in your opinion, is competent to carry out that translation. If you are to go a level higher you say okay, I need to have an interpreter here which has passed an institute of linguistics test in the UK. But then you're talking about a very high level of translator."

As well as the need to balance a high standard of English language with that of tradespecific language and understanding, this description highlights the stages within this recruitment process where judgements and decisions need to be made about the competencies of existing workers onsite to fulfil such a role, without (the rare occurrence of) externally recruiting "a very high level of translator". We now describe three different communication roles encountered during our research, which were developed on construction projects.

Role A: Magda, trade contractor manager

Magda is the manager of a Polish-owned trade subcontractor who are 'fitting out' the furniture – kitchen units, workshops, bedrooms etc. – on a major contractor accommodation project. This is Magda's second job for the company in the UK, before which she did not have any construction experience. Her job is to manage and provide interpretation and translation for 11-15 Polish workers who were recruited in Poland and brought over as a team, and cannot speak English other than the phrases they have picked up through their everyday work on site and living in England.

"They can earn more money here so the best ones come here. The guys don't speak English. Although some of them try something."

The workers' social lives are intertwined with their working lives, with "my boss renting the house for us and all the guys working... seven living in one house and the others in another house" close to the site. In this way, Magda describes how they are a close-knit team, where the communication channels are always open: "if we don't discuss something onsite we can discuss at home".

Translation and interpretation are a big part of Magda's job and her role is essential onsite, especially considering the number of non-English speaking workers who she manages, and that her interpreting skills are, on a typical day-to-day basis, unique to her onsite. Magda is the first (and often only) point of everyday health and safety information accessed by the subcontracted Polish workers, with the regional manager visiting the site about once a week. This makes her role within the induction process all the more crucial: "I make the induction in Polish... I have a copy, I read it first and then I make the induction in Polish". As a Romanian health and safety manager, working on a different major contractor site, reminds us, this communication role can be critical and difficult to replace or substitute for:

"It's very difficult to find someone with knowledge to be translator... what happens if this guy's sick- off sick for a week because he's got the flu? Whose going to manage, whose going to supervise the workforce?... so you have to have always a second contingency plan"

Magda describes how a Polish worker in the team is developing into an unofficial interpreter for the workers (and mediator with the English personnel onsite) on the rare occasions when she is unavailable. Although this is clearly a very temporary measure, with a different plan needed for any long term absence.

Informal measures have also been developed over time to bridge the gaps between language and construction expertise among Magda's team. For example a *Screw Fix* catalogue is often used to source and clarify the right tools and equipment. It is significant that a catalogue of supplies with specific measurements, technical specifications and information ("we have the picture in the catalogue") is being preferred to the more basic accredited and official Polish translations circulated by the construction industry. Interestingly, for this specific team, this communication resource often helps

effectively bridge the gaps in the workers' English language skills and manager Magda's construction expertise.

While Magda liaises with the English managers and contractor personnel in a managerial capacity, her everyday work involves drawing on the construction and technical expertise of the highly competent and experienced fitters and supplying their needs for the job. As Magda explains, after taking a mobile phone call from a worker during an interview:

"Sometimes you have big problem here, [to] sort it out ... boys call you: tell me: 'oh you have to translate something and go onsite...' if they need a forklift or something they call me."

Here Magda plays an essential role in supporting the team and is their dominant (and in many cases only) communication channel with the English-speaking staff of the major contractor and other trades on the site in which their microcosm of team work is situated.

Role B: Artur, ganger (ex-Agency Worker)

Migrant workers employed through subcontractors and agencies can also develop and take on roles of interpretation onsite through more informal routes. Although, our study found that the transition from construction agency migrant worker to permanent employee with the contractor is very rare, where we did encounter it, it was almost always linked with the worker assuming an additional language responsibility in a interpreter and/or translator role onsite. This was the case for Polish ganger Artur, who we met on a large site run by a major contractor.

At nineteen years of age, Artur migrated to the UK from Poland, with no previous construction experience and very few English language skills, and "was going to come just for three months and then go back to study [Financial Management in Poland]" but had remained with an agency for three construction jobs across the UK. There is reluctance from both workers and management to discuss the rare process of 'taking on' agency workers full time, although many major contractor projects had a few workers who fitted into this category. If a migrant worker, employed by an agency, wants to negotiate a better deal (more responsibility, more pay, different work, or even this rare transition to permanent worker) it has to be done through the contractor onsite. Taking on extra responsibilities for extra pay, such as translating and/or leading other migrant workers in a gang, was a common way in which such informal roles were developed over the course of the construction projects we researched.

"If you two were working as a team, and one of you was more cuter than the other, and then possibly you'd be on a pound an hour more than him... but you would come on the same rate initially. But I'd get you aside and say "do this and run the two of you, and I'll give you an extra pound an hour"

(Health and safety manager, major contractor project).

This is the type of situation in which Artur began to take on interpretation duties as part of his everyday work with other Polish personnel onsite. A general foreman for the major contractor had a big influence on Artur's career and his choices in the UK construction industry. Artur described how he helped get him "direct with [the major contractor]" and made him a Ganger. The transition involved Artur leaving the agency (and telling them he was returning to Poland) before then signing a contract with the major contractor and returning to work on site: "he can tell the agency that we're going back to Poland, and then, straight back to [the major contractor]". This apparent 'leap of faith' – in leaving the agency before getting a permanent contract – was not viewed as a problem by Artur, or seen as a risk, since he trusted the foreman's role in the process. It was in this post that the interpreter role became a major part of his job, "to help with everybody else", which included interpreting for workers over the phone, sometimes to communicate with workers on upper floors of the tower block rather than needing to bring them down to ground level for instruction.

Role C: Lukasz, traffic marshal

Lukasz is a Polish migrant who works as a traffic marshal for a logistics subcontractor on a major contractor project, and previously worked in Germany for three years as an 'English supervisor'. Lukasz has taken on a language function for extra pay. His extra responsibility officially involves running Polish safety and language sessions during training days and trades union 'Stand Down' days on the project. He also conducts site inductions for migrant workers struggling with the delivery in English, and has developed and planned the inductions over the project. He was also involved in four series of evening general English language classes for migrant workers with a special unit on construction (funded through the major contractor and 'second-tier' contractors). The classes used only English tutors and so Lukasz was drafted in to help with interpretation within these sessions. He has also helped with the translation of documents, signs and posters to attend to emergent health, safety and welfare issues.

Through his 'second role', Lukasz has also become an unofficial focal point for helping Polish workers onsite, with workers often coming to him with broader communication/cultural questions. This includes dealing with questions and problems which migrant workers encounter with documents in their on-and-off site lives which, as Lukasz comments, can be as diverse as explaining council forms to helping to fill in a fishing rod licence. This goes beyond health and safety, to welfare information, crosscutting the workers' cultural lives and working lives.

The dual (or even conflicting) nature of Lukasz's roles was very apparent during an interview with him (arranged through the health and safety manager), when one of Lukasz's managers from logistics burst into the office shouting at him, and was adamant about him coming to fix kerbing in his section. This may reveal the way his language and advisory work needs to 'fit in' between and around his ongoing trade work for the logistics contractor.

Worker engagement in health & safety (and translation/interpretation)

The role of informal translators and interpreters on site can be linked to major contractor policy to increase worker engagement in health & safety. Lukasz works on a major contractor site for a large project over a five-year period where there is the time and the scope to implement such a scheme to give all workers full opportunity to contribute to the site health and safety culture.

However, the increased level of (migrant) worker engagement in health and safety, in terms of language duties, needs to be closely monitored to check that it is a fair deal for

all. This is to ensure that migrant workers with linguistic skills are not being taken advantage of, in terms of providing, what would otherwise be, expensive interpretation and translation skills for free. Linked to this is the grouping of translation jobs with award schemes and prizes for promoting safe practice. Many sites implement a safety award scheme. Yet, the translation of health and safety documents is not what these safety awards were initially intended for. For example, one monthly safety award of £100 vouchers encourages workers to "get rewarded for safe actions". Yet, during our research, we found that such safety award schemes often rewarded translation, such as a prize shared by two Polish workers for translating presentations and daily start booklets. Of course, this translation work clearly contributes towards better site health and safety culture and performance, but could not really be cited as a 'safe action'. This can also be a way to 'reward' workers within a process which can be difficult to negotiate better deals for the workers, as our discussion of agencies has already shown.

However, the worry is that such a scheme might be sending out the wrong message about management attitudes to safe working onsite. There is also the intriguing question of whether such informal translation of health and safety documentation is actually asking some migrant workers to take on too much responsibility for skills which they may not be trained or paid for.

Recommendations Recognising the role of translators and interpreters

Translators and interpreters play a key role in enabling communication between migrant workers and their indigenous counterparts. Official recognition of the practices of translation and interpretation is needed, especially in terms of formalising this role on site. Rewarding interpreters for taking on the additional burden of speaking for groups of workers or relaying instructions and health and safety messages is key.

However, there also needs to be a form of regulation to ensure the effectiveness of those in this role. For example, standard English language tests such as IELTS or TOEFL could offer an indication of the translational abilities of such workers which would be relatively easy to establish. A scheme to assess language translation would be beneficial both for contractors, to provide a knowledge-base of the language skills and competencies of migrant workers, and for better acknowledging the skills set and enhancing the career path of migrant workers in construction.

The roles of interpreters and translators on site are unregulated and so their possible impact is uncertain. Given the crucial importance of both functions to enabling safe and healthy working, research should be undertaken to establish standards, appropriate levels of responsibility and reward for those taking on such roles.

The role of outreach workers should also be further explored. Such workers with foreign language skills provide a useful, accessible conduit for health and safety learning and provide an important advocacy role on some larger sites. Extending their coverage to smaller sites would appear an effective way to promote learning, transfer good practice and ensure migrant worker voice.

Acknowledging migrant workers' existing communication channels

Teamwork and communication

This case study of the collaborative work of communication between a team of curtainwall installers will start to probe at the assumptions (and factors) of what makes safe practice and effective communication on site. We spent an intensive period of time with one group of workers, and individual workers within that group, to gain a closer understanding of the communication channels available to these migrant construction workers and how they operate in practice. Indeed, it was quite literally a study 'from the ground up', by following the work of a team of curtainwall installers, and the communication between the ground floor workers and the twelfth floor workers as the cladding panels were raised and installed. By studying the team work 'from the ground up', we look beyond simply the communication between site managers and migrant workers, to the broader context of effective communication of safety between the team. Here we try to unpack some of the collaborative practices amongst members of the team and the project which help to achieve successful communication and assess the role that English language skills actually play in the process:

Viktor² is a Russian curtainwall installer, and explains that he is employed directly by the subcontractor and that his team is made up not only of Polish, Russian workers and Italian management, but also Lithuanian and Bulgarian workers and English supervisors. While he is waiting to lift a cladding panel up a floor with a floor crane, we ask him some questions. We learn that Viktor (who is in his early thirties) has been working with the company in the UK for three years and has a family back in Russia who he visits every few months. Most of the projects have been in London, although one was in North West England, and he has worked the jobs with the same core team of personnel.



² All names have been changed to ensure anonymity

After answering a few of our questions, Viktor started to volunteer descriptions of what he was doing and suddenly a world of communication channels, hidden from lay observers like ourselves, came into closer focus. After a short exchange through a small earphone and microphone (which we had failed to notice before), Viktor explains that he is communicating with workers on the floors directly above and below him, who are not visible. "Did you see the hand signals?" Viktor asks after a suspended panel is guided upwards. When Viktor, up on the twelfth floor, shouts key phrases back and forth to the workers on the ground, we ask him what was said. "I can tell you what I said, but it was in many languages", he answers. As we look back puzzled, Viktor explains that "we've got our own language" – mixing words and phrases from different East-European Languages depending on who is being addressed.

The vast majority of the assembled team had worked together on past curtainwall jobs in the UK for at least two years, and already knew that they would be working together on the next project after the current job is finished. It is notable that this team of workers, who hold a permanent contract, are thought of as maintaining the highest levels of safe working, since on this particular site the curtainwall operatives stand out from the typical self-employed/ agency workers. For many jobs on site, the composition of gangs can change throughout the course of a week or even one day, and in these dynamic trades the activities and work which the team are engaged in can vary from moment to moment. These curtainwall installers can be seen as having a stable job in both senses, of having a permanent contract and, when working on a large office block project such as this, of maintaining a fairly stable team/working unit.

Communication channels in operation

The subcontractor managers were mostly Italian, the major contractor section manager was English, and the workers and supervisors were a mixture of Russian, Polish, Lithuanian, and Bulgarian – so English was not necessarily the common spoken language. While observing his work, these calls back and forth were mainly between Viktor and a Lithuanian supervisor, and Viktor and a Bulgarian worker. Viktor told us this communication concerned making slight adjustments and checks while the panel was suspended in the air. The section manager for the external envelope of the building, who worked for the major contractor but described his job as mostly "looking after" the curtainwall installers, identified a major function of the dialogue between twelfth floor workers and ground level supervisor as being to maintain a clearance zone. Gesture as well as vocal communication was practiced as part of this communication, with simple hand signals being used by Viktor during the process of the ground floor workers guiding the panel up to the higher floor, using ropes to steady it so that it did not spin about in the air. In addition to communication with the visible workers twelve floors down, an ear piece and phone link was used to communicate with the workers on the floors directly below Viktor and his crane, who were not easily visible to him. This was crucial for checking the small movements needed to pull the suspended glazing panels in from Viktor's pulley, and have the panels safely secured into place.

The rich communication channels already identified here are additional aspects to his main task-at-hand – that of operating the crane lift. While this multitude of tasks – maintaining contact and regular checks with workers on the floors immediately above and below, and with workers at ground level – is not a secondary-role or minor part of the job, they are seen as part of the finer-grained 'tuning' of window fitting by the workers.

They are details which had to be 'sought out' from Viktor while at work, rather than them being offered to us as an explicit part of his job description. They are part of the established team dynamics; the well-rehearsed communication practices and working relationships built up through months, and in most cases years, of curtainwall fixing together on construction projects.

Emerging incidents quickly remind us of the world (of ongoing site activity) outside this microcosm of action. Communication (including warnings) and coordination with other site work is essential. On one occasion, the cladding work of the team was temporarily suspended shortly after we left Viktor, because a large crane, with its suspended load, was in operation above.

We had left the tower block to observe the operation of the cladding team from the ground floor. The Lithuanian supervisor, Tomas, who we met working at ground level was a key figure in the 'hands on' coordination of the curtainwall activity of the team. He liaises with managers and subcontractor engineers on the ground, who always come to see him (rather than the other way round) since he is coordinating the ground level work. Because of his 'hands on' role, Tomas has to be continually 'interruptible' as well as ready to answer questions and deal with problems from the general workers whose tasks he is overseeing. In this sense his visibility is important – and it is notable that Viktor identifies him to us from the twelfth floor as an important contact point in the team's communication process. Tomas is the main focus, on the ground, for time-critical problems. He also has a good vantage point, and helps coordinate the 'pulling in' of the panel when the aforementioned large crane is in operation overhead. Tomas told us that the team of workers does commonly speak English, but this is intermixed with East European languages as well, especially during quieter chat among themselves. However his louder 'orders' – clear simple, commands – were always delivered in English.



We did not receive a conclusive answer from Tomas on why this is the case, but could posit several suggestions. First is the link between English language and authority on this site (with English management), which could explain the use of English for imperative and command forms. Secondly, and linked with the first, is that the contrast of English against a backdrop of mixed East-European languages could be used to mark a significant shift in the level of message being communicated, through its standard employment for critical events and actions. In other words, hearing a raised voice in English becomes equated with important information being communicated to the team.

Maintaining the intricate network of communication channels between team members is not, overtly, a primary function of the workers' role onsite. Nor is their communication necessarily 'knowable' and understood at the same level by all workers in the team – i.e. think about how Viktor's choice of language identifies, or is understandable only by, certain workers. Or consider the section manager's understanding that the 'shouting' between Viktor and the ground-workers is mostly about maintaining a clearance zone rather than about the minor adjustments of the panel whilst suspended in the air, as described by Viktor. While their messages may not be universally understood by all of the workers (since they are intended to be selective) and, while they are not easily defined within the task-based nature of their work, these communication channels must be seen as playing an important role in achieving the efficient and 'safe' process of curtainwalling recognised site-wide by other workers and management.

Language(s) among the team

While English is not, arguably, the common or dominant spoken language between the team, there is no danger of the migrant workers simply reverting to their first-language in order to communicate with their colleagues, since there is also not a single, dominant East-European language uniting the gang. So, while catching an initial earshot of East-European spoken words from the gang might indicate otherwise, this is not an incident of the 'linguistic ghettos' in the workplace, which can further inhibit integration and second language acquisition. Rather, the speaking of their adaptable language (including English and Italian as well as East European languages) is the tailoring of communication content in order to identify, address and communicate with specific workers in the team. However, this does not make the understanding and communication of English language less important for the gang of workers. We have already seen how their critical ground-level commands are communicated in English as standard by the supervisor.

The health and safety manager of the major contractor on site describes how the curtainwall fixers do not necessarily speak English as standard – they "speak broken English", "can understand" and "pick up the English" – but praises the skill and quality of the work delivered by the team. Viktor explains how "broken English" interspersed with other languages, or in his words "our own language", help serves a specific form of communication. The major contractor and project as a whole have certainly come to 'interpret' their work as safe practice, indeed they are heralded on the top of the Site Safety League Board, taking pride of public place beside the site entrance. While English language skills are essential for such teams, our study shows that it is important to recognise that good practice is not as clear-cut as delineating fluent English-speaking and Non-English speaking teams or workers, as there can be a multitude of communication channels underpinning the successful functioning of the team as a whole.

Recommendations Acknowledging migrant workers' existing communication channels

It is very important to emphasise that good practice is not as clear-cut as delineating fluent English-speaking and Non-English speaking teams or workers, as there can be a multitude of communication channels underpinning the successful functioning of the team as a whole. Furthermore, maintaining the intricate network of communication channels between team members is not, overtly, a primary function of the workers' role onsite. Their communication is not necessarily 'knowable' and understood at the same level by all workers in the team. In other words, safe working practice for migrant workers is highly context specific and no standardised practices would provide a route to resolving the issues contained within this report. Thus, all of the recommendations have been designed in such a way as to promote localised interpretation and enactment rather than an as a normative framework. They have also been devised in such a way as to integrate with the establishment of a positive health and safety culture more generally.

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