

Using a ghost unit to show you what standards and qualifications are not telling you.

Uncovering the hidden generic skills contained in occupational competences

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1. Introduction

Rather than take the expected approach to writing reports of this nature I have decided to adopt a style better suited to telling the straightforward story of what was done, what was discovered, what this might mean and what the next moves might be.

This different approach will be immediately apparent in my use of the first person. Less immediate, but nonetheless apparent, is the lack of references to the work of others in this area. This is deliberate. Time and space available prevents me from conducting any kind of thorough exploration of such work, and certainly would not allow me to do it justice. This stops me from locating this paper within a wider discourse and this is unfortunate. However, it does afford me the opportunity to tell the story as a self-contained narrative.

The paper and its findings are a direct result of a publically funded project concerned, principally, with finding ways to embed *Skills for Life* and Key Skills (part of the official literacy, language and numeracy strategy in England) into the work of those involved in creating vocational qualifications. Though initial work sought to target those awarding bodies responsible for developing, supporting and certificating achievement against their own vocational qualifications, the focus moved on to incorporate the standard setting bodies responsible for creating the standards underpinning those qualifications.

It was the work done in partnership with these standard setting bodies, called Sector Skills Councils (SSCs) that aroused suspicions that key employability skills were not being adequately addressed, and ultimately assessed, under present arrangements.

2. What exactly are we assessing when we assess qualifications based on standards?

National Occupational Standards (NOS) are based on a nationally agreed set of occupational competences which are underpinned by a nexus of wider, more generic or fundamental sets of knowledge, skills and understanding. This is generally understood across the vocational education and training (VET) sector in England. These generic skills are often assumed to be in place as the learner embarks on an occupational training programme or a vocational qualification and if not it is hoped that initial and diagnostic assessment will identify areas in need of further development. However, many of the standards and the competences they contain are predicated on quite specific levels of generic skills that are seldom explicitly stated in the standards and, as a result, tend not to appear in any explicit way in the qualifications. Thus, they fail to appear as discrete learning outcomes or expectations and assessment requirements in the corresponding assessment outcomes. By failing to recognise and assess these skills explicitly, we undermine a key part of what makes vocational education and training valuable for employers, trainees and learners alike. These particular skills are part of that transferable skill set which learners have at their disposal should they want or have to change direction during their working lives.

The English vocational approach is predicated on a system that has qualifications created from National Occupational Standards. Qualifications designed to ensure you are occupationally competent have a tight relationship with the standards, while vocational qualifications serving a different purpose and more about education rather than training, have a less direct relationship with the standards.

This paper looks at the issues of assuming too much in standards writing and discusses how we can move to more explicit methods of stating what being occupationally competent or vocationally capable really means, and then assessing it appropriately. The paper centres on the literacy, language and numeracy (LLN) policy agenda in England, focusing on literacy in particular. However, the message is not limited to just these areas and has implications (and application) for the wider nexus of employability skills. Our early work shows that in many cases, if not most, these employability skills may be equally hidden or buried within specific competences.

3. Embedding as a way forward

Key to this story is the concept of embedding and the faith that policy makers and practitioners rightly have in it. By looking at the comments made by three of the main policy 'movers and shakers' about the process of embedding, we can get a better understanding of concept. For the Quality Improvement Agency (QIA)¹, embedded teaching and learning in the context of the *Skills for Life* (LLN) strategy:

*... combines the development of literacy, language and numeracy with vocational and other skills. The skills acquired provide learners with the confidence, competence and motivation necessary for them to progress, gain qualifications and to succeed in life and at work.*²

The National Institute for Adult Continuing Education (NIACE)³ offers the following working definition and elaboration. For NIACE, embedding is the:

Activities or experiences supporting the development of basic skills in participants in the activities or experiences, and in the context of those activities or experiences.

The activity within which the skills are embedded can, as you might expect, be a course in some other aspect of learning or training, but with the opportunity to develop the individual learner's Basic Skills within the principal activities of the course.

*The skills developed and the activities used to develop them should be based upon the identified needs of the individual, and should be charted against the framework of national standards for Basic Skills, particularly in the context of allowing for quality control and access to funding for Embedded Basic Skills.*⁴

¹ The government agency charged with working across the Further Education sector to improve performance.

² Taken from QIA website at www.sflip.org.uk/embeddinglln.aspx

³ NIACE exists to promote the study and general advancement of adult continuing education.

⁴ Taken from www.niace.org.uk/projects/learningfromexperience/EBS/What-is-EBS.htm

Again in the context of the Skills for Life strategy, the Adult Basic Skills Strategy Unit (ABSSU)⁵ said:

*Embedded teaching and learning combines the development of literacy, language and numeracy with vocational and other skills.*⁶

Implied in the explanations from each of the three major embedding proponents is the notion that embedding involves taking something external (literacy, numeracy or language, for example) and then trying to integrate it to varying degrees into something else (a vocational programme, for instance). This is akin to the medicine in the sugar lump approach. The reason behind this is that we know LLN learning is much more effectively learned when it is applied, and particularly when it is applied in a context in which the learner is interested.

Each of the agencies in their turn does valuable work promoting the undoubted benefits of embedded learning, and the evidence amassed in favour of such approaches is impressive and hard to ignore or dispute. There is also the strong and constant flow of anecdotal evidence coming from practitioners engaged in active embedding activities. Again, this is compelling.

The two main features of this embedded approach are that:

1. The literacy, language and/or numeracy is best learned as part and parcel of the vocational learning (embedded) but is recognised and certificated in a manner that is external to the main vocational learning. The best way to tackle the learning and development of basic skills like literacy and numeracy is to teach them through their vocational programme so learners can see the relevance (and worth) of this knowledge and skills set by seeing and experiencing how it is purposefully used in the vocational programme.
2. The expertise driving this approach remains external to the main vocational learning, although in best practice scenarios the specialist teaching staff work in partnership with the subject specialists as part of the embedding approach.

To clarify and to bring both features together in one example:

A learner on a health and social care course has a better chance of learning and valuing the learning associated with a literacy qualification if it is taught in an integrated fashion within their health and social care program and is done so in a way that is delivered by the literacy specialist and health and social care specialist working together.

Perhaps this is a little too simply stated, but in essence this is the prevailing best practice paradigm. It does, however, need an institutional culture that values and supports this approach.

In this type of scenario the literacy or numeracy is always recognised as critical by the education agencies (and employers), and subject to discrete targets and measurement, so it is assessed, or at least recognised, as a discrete or external qualification (i.e. non-embedded). Thus there is the contradictory message that embedding is vital and desirable for success in learning but not desirable in approach as a way of measuring or recording. The driver here is not just the need to measure success against targets set by policy makers, but also reflects the need to have at least some portion of the assessment based in a generic, context free way (a kind of anti-embedding). This seeks to ensure LLN learning and skills development is not entirely context dependent and that literacy and

⁵ The then official government departmental unit responsible for official LLN policy.

⁶ Quote taken from www.niace.org.uk/projects/learningfromexperience/EBS/What-is-EBS.htm

numeracy skills learned and developed will be transferable, i.e. the learner having achieved these skills in one context will be able to use them in another.

So, embedding in learning is thought to be a powerful and effective technique, but in assessment this idea breaks down because it undermines the need to ensure learners can transfer this learning to other contexts. With the learning and skills development sited in the vocational learning programme and the assessment located elsewhere, vocational learning programme assessment (along with GCSE and GCE assessment) has evolved in such a way as to exclude LLN from their own learning and assessment requirements. There is also the fear that to embed the literacy or numeracy assessment within vocational qualifications (where we encourage the student to learn it and the teachers to deliver it) would impact significantly on achievement rates within these programmes. However, we think, based on our project findings, there is a compelling argument to have specific types of literacy and numeracy skills (and potentially wider aspects of the generic skills nexus) assessed more explicitly within vocational programmes.

We now know that delivering embedded learning is best achieved by close working relationships between literacy, language or numeracy teachers and vocational specialists. This model places heavy resource implications on centres. The demands on LLN staff time to service and support all departments in learning institutions points up the challenge of making this approach work effectively, consistently and continually across whole organisations. It is necessary to close the gap between the vocational teachers and the LLN specialists and we think we have found a way to begin this process.

4. Why current delivery focused embedding strategies are not enough

The National Research and Development Centre for Adult Literacy and Numeracy (NRDC) has produced sufficiently compelling evidence to convince that embedding strategies within the classroom and institution are capable of making a dramatic effect on learner retention and achievement rates. From larger scale longitudinal studies to more practitioner driven research their work has signalled that embedding is an important pedagogical approach, capable of making a clear difference.⁷ My own concern is that not enough is being done further up-stream at the qualification development and derivation stages and that embedding is hindered by this. Listening to practitioners struggling to deal with the evidence requirements of a Key Skill or learning outcomes in a Basic Skill, or to specialist LLN teachers trying not to resort to something contrived just fully to cover the requirements of an LLN qualification, or even listening to learners unenthused by the time spent away from their subject interest to deal with some aspects of LLN, makes me believe that embedding needs to be more widely applied.

The embedding agenda needs to pursue actively the goal of introducing and supporting best practice in the classroom or training environment. However, policy makers and regulators alike need to turn the embedding spotlight on the supply side as well as the delivery side. It is hard to embed LLN in vocational or occupational qualifications; hard in the sense that it takes a lot of time and effort. It shouldn't be; it needn't be. More needs to be done at the qualification development stage to ensure implicit LLN skills, upon which parts of the qualification are dependent, are more explicitly dealt with in the vocational qualification's own learning programme (and I would suggest assessment regime). With so many qualifications, units and even awarding bodies in the English VET

⁷ See "You wouldn't expect a maths teacher to teach plastering..." Embedding literacy, language and numeracy in post-16 vocational programmes – the impact on learning and achievement. (November 2006) and Embedded teaching and learning of adult literacy, numeracy and ESOL (August 2005), both available as downloads from www.nrdc.org.uk

system, this can only be done by using the leverage afforded the regulators and standard setting bodies. These agencies are the qualification gatekeepers. Standards that show more explicitly the specific LLN skills that underpin particular competences or learning outcomes and assessment requirements change the way qualifications arrive in the classroom. They will arrive 'embedding ready'. Learners (and staff) will see that key aspects of LLN are integral and essential in their vocational programmes and in this changed atmosphere and in this changed relationship between LLN and the vocational and occupational qualifications embedding is likely to be a less challenging and even more effective process.

It is also worth noting that the job of ensuring that all of the content of discrete LLN qualifications (all at the same level of skill) is embedded within a vocational or occupational programme is a challenging one. Again, it needn't be. Policy makers take a very fixed view of the way LLN needs to be assessed and of the way it all needs to be bundled together. Smaller qualifications based around specific skill sets, for example, separating out speaking and listening, reading and writing, would allow them to respond better to changing and diverse needs. These smaller parcels would be more soluble within a range of contexts and most importantly allow the learner to pick up the levels that match their vocational programme profiles. They would also allow a learner to 'top-up' specific skill areas more easily without having to learn a wider than was needed/wanted set of skills. This, though, is for another paper.

5. Moving the embedding debate out of the classroom and into the VET infrastructure

Between January and April 2008, AlphaPlus Consultancy Ltd was commissioned by the English qualifications regulatory authority⁸ to look at how to embed literacy, numeracy and/or ICT skills within vocational qualifications. The commission was itself an extension of a three year project to work with awarding bodies and with standard setting bodies to look at how embedding could be adopted in various aspects of their core business. For example, we worked with awarding bodies to look at embedding within the qualification writing, development and support process, and with standard setting bodies to look at embedding within standards development and employer support.⁹

A gap of about 6 months existed between the main three year project finishing and the extension work starting. This gap was important. The down time provided sufficient space and distance to allow reflection and analysis of project successes and failures. One key issue was the difficulty experienced in creating the conditions which would enable employer-led organisations, awarding bodies, policy makers and practitioners to participate in a common discourse involving a common vocabulary and shared understanding. We needed to find a way of stripping the messages right down to succinct, simple terms that all could access, and to move on to embedding models that had implications for standard setters, awarding bodies, regulators and policy makers alike.

The other key consideration driving the work of the project was that many of the problems that arise when learners try to learn and develop LLN knowledge and skills occur because, generally, the vocational qualifications (and the LLN qualifications) have evolved separately and are drawn up in isolation from each other. Various techniques designed to help, for example mapping between the

⁸ The Qualifications and Curriculum Authority (QCA)

⁹ Information about both projects can be found on the AlphaPlus website (www.alphaplusconsultancy.co.uk) and the outcomes resulting from our work with the awarding bodies and standard setting bodies can be seen on the project website (www.totallyskilled.org.uk).

two or signposting opportunities to integrate LLN into vocational programmes, are, at best, useful ways to cope with this anomaly and, at worst, minimalist attempts to ensure that part of the accreditation requirements for qualifications are met.¹⁰

While the first project began to influence how qualifications are designed and developed, in the extension project we went after a more powerful lever; how standards are written and supported. The thinking was that if we could influence how standards were developed then we could change how qualifications are written and make it easier to embed LLN in the classroom. Closer analysis of National Occupational Standards showed that the standards themselves were often built on the assumption that those working towards specific competences within the standards had particular levels of LLN skills. These were rarely explicitly stated in the standards themselves but were hidden within the occupational competences required of people working towards these standards.

While it should be acknowledged that all NOS are based on the assumption that those working towards them have already mastered an array of generic skills, e.g. communication, some parts of the NOS are written with some very specific assumptions made about levels of LLN ability. And, while the argument about standards being level-less may be the prevailing and preferred view, it seems quite clear that there are some competences entirely framed around levels of LLN ability.

The assumptions made about LLN ability at the standards writing stage, or the lack of attention paid to the implicit LLN skills needed to complete specific competences, means that some NOS may be used to create occupational qualifications at Level 1 but contain implicit levels of LLN skills at higher levels.

To explore these suspicions further, we looked at a suite of NOS recently developed for the logistics sector, NOS developed for the textile manufacturing sector and for the play work sector.

5.1 What we did

Working with specialists in the sector and with LLN specialists, we deconstructed the NOS to begin to reveal some of the LLN assumptions that were implicit in specific competences. We were less concerned by the general skills and general skill levels that underpin the NOS *per se* but were looking for particular LLN skills that were assumed in drawing up specific competences. For example, we were less concerned that the NOS required people to read, but were more concerned about specific competences that assumed a particular level of reading ability.

Much of the initial research was conducted in the workplace, where we looked for examples of how the competences were being applied in work situations. Evidence of the competences being used and the implicit LLN skills in action was collected. We were then able to go back to the NOS and identify what they were not explicitly telling you about the hidden LLN skills within. Remembering concerns about the need to present this information in a way that was easily accessible and ultimately useable, we decided to present this information in the same format and style as a unit of the NOS.¹¹

By unearthing the assumptions about particular levels of LLN skills implicit in particular competences, and repeating the process across whole suites of NOS, we were able to create a bank

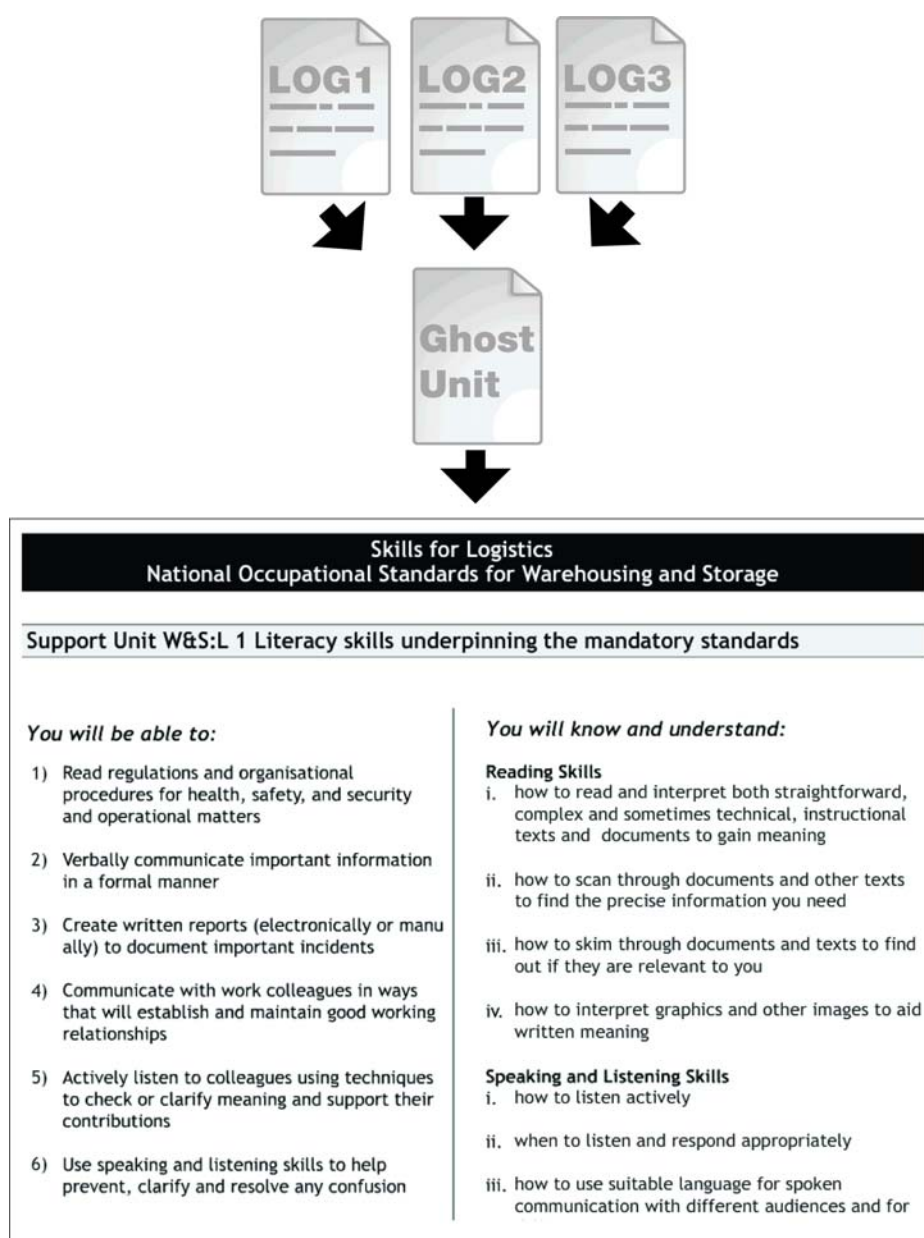
¹⁰ Qualifications have to be approved by the regulator (QCA) before they can be admitted to the national qualifications framework and become eligible for public funding. One accreditation requirement is that there is some guidance given on how the proposed qualification provides opportunities for LLN.

¹¹ The NOS are presented as units with the style and manner of presentation varying from sector to sector.

of hidden LLN assumptions. Presenting these hidden LLN skills as a unit, looking like any other NOS in the sector, allowed us to show what the standards were not telling users in a language they could understand. This ghost unit, easily understood because of the high recognition factor, was a more honest appraisal of the LLN skills that were needed if these standards were to be met. The ghost unit name also helped get across the point that it wasn't a real unit but a guidance tool.

The ghost unit contains some of the key transferable skills within the NOS and need not be limited to just LLN. The same process could be conducted for other generic skills. Indeed the newly launched Personal, Thinking and Learning Skills (PLTS) framework of employability skills, so important in the generic learning requirements of the new Diplomas, could just as easily be the focus.

Diagram 1: Creating a ghost unit from Logistics NOS



By presenting hidden LLN skills in a way that could be easily understood by the sector concerned we were able to put across the argument more convincingly. It also rapidly became apparent how this information could be used. Four key audiences were identified:

1. NOS writers
2. Regulatory authorities
3. Awarding Bodies, and
4. Training providers and qualification deliverers

5.1.1 NOS Writers

The ghost unit could be used as a tool to raise awareness with NOS writers about the kinds of assumptions about LLN they were making when they created NOS. The ghost unit could be used to stimulate discussion about the appropriateness of some of the assumptions made and whether the specific LLN skills should be more explicitly stated.

5.1.2 Regulatory Authorities

If NOS, and in turn qualifications, were presented to the appropriate regulatory bodies with a ghost unit or units as part of the accreditation package, this was thought to be a more purposeful way to start to address the LLN agenda. The present mapping requirements and signposting do little to move this agenda forward, whereas the ghost unit is in itself a symbol of the work that has gone on within the NOS writing and qualification development communities to establish how each relates to the LLN agenda. It provides a far more useful and effective platform to take LLN forward.

5.1.3 Awarding Bodies

In discussion with the standard setting bodies and awarding bodies, it became clear that the existence of a ghost unit showing the hidden LLN skills required could help in the creation of qualifications based on the standards. The ghost unit could provide a useful tool to ensure these hidden skills found their way into qualifications and were explicitly addressed.

5.1.4 Training providers and qualification deliverers

Because in the play work sector the NOS are the same as the occupational qualifications, the play work ghost unit was also useful to qualification users. Having an explicit statement of the LLN requirements proved useful in helping to judge the levels of learners newly recruited onto programmes. The ghost unit helped illustrate to new recruits why LLN was important by dealing with it in the play work role and showing to learners that skills gaps that may exist in specific LLN areas would need to be mastered in order to move forward.

The ghost unit also reminded the specialist vocational delivery staff and trainers that if these LLN skills were present in the NOS, they too should also have mastery of them. Although vocational teachers may be more comfortable teaching within their areas of expertise, they have a significant/valuable contribution to taking a more integral role in LLN delivery and achievement. While the actual pedagogy may well be left to the LLN specialists, the vocational specialists now need to demonstrate to their learners the intrinsic value of the LLN skills to their area of occupational competence.

The basic premise behind the ghost unit became its greatest strength. It serves to tell users of the NOS more about the competences they contain. However, it also raises some uncomfortable issues. Suspicions were raised in a number of quarters about whether in fact those being certificated as

having achieved occupational qualifications based on these NOS actually had the LLN skills described in the ghost unit. If the skills were hidden in the NOS, had they actually found their way into qualifications and training programmes?

5.2 Putting the case convincingly

The ghost unit process as it relates to NOS puts the LLN agenda right at the heart of the vocational education and training framework. It serves as one way to identify the skills needs at source. In locating the LLN needs already present, albeit hidden, within the NOS, we are able to show to the learner, trainee, and trainer and delivery workforce alike that LLN, in some form or another, is critical to their vocational pathway. It also puts the whole LLN debate on a different footing within VET. Rather than being driven by the need to address qualifications external to the central vocational or occupational learning or training programme, the driver comes from within the programme itself. Two leaps of faith are however necessary here. The first is the acceptance that different NOS in different sectors create different LLN needs profiles and as a result lead to different ghost unit content. Indeed, within sectors different job areas have different LLN profiles so the ghost unit created for road hauliers (truck drivers) and drawn from the Warehousing and Storage NOS will be different from other job roles within the logistics sector which will use different NOS. The second leap is the need to accept that while ultimately the only existing way of measuring a learner or trainee's LLN abilities is through nationally agreed, one size fits all qualifications (at each level in each LLN area),, e.g. Key Skills, Basic Skills, Essential Skills, Core Skills and now Functional Skills, the learning doesn't have to start there and could be driven by the profile of needs identified in the NOS.

There were some key messages that helped us put the case convincingly to those suspicious of our motives:

- We didn't put the LLN in the standards we just uncovered them
- We aren't making the standards and subsequent qualifications bigger because this LLN was in there anyway
- Vocational tutors and learners alike can no longer react negatively to the need to address external or *alien* skills because the skills are required by the occupation. They are in the standards.

6. Conclusions

The ghost unit as process and outcome is not a panacea. Our work to date shows that numeracy is a harder skill to track down and is less likely to be as evident in its presence in NOS, generally. By letting the NOS become the driver for the LLN skills needed in each sector we also have to acknowledge that we will end up with a profile approach. For example, a learner or trainee may need to have reading skills identified at level 2 but speaking and listening skills and/or writing skills recognised at a different level. Here the single levels of national LLN qualifications then become problematic, and, while the learner can work to match the LLN skills profile needed for occupational or vocational qualifications, there will be gaps that need to be filled if they are to achieve a single level across all skills areas to meet national qualification requirements. We must also acknowledge that there is a gap that exists between the LLN skills contained within a ghost unit and the requirements for the prevailing LLN qualifications. While the ghost unit is a useful tool in helping to ensure the necessary LLN skills are explicitly learned and developed, should the learner or trainee want to have a recognised LLN qualification they will need to address this gap through additional learning.

We believe the ghost unit approach has shown that there is a strong argument to change the way both the NOS and the vocational qualifications are written. There is also sufficient reason to send the message that embedding is not just a delivery issue, but is a strategic and structural concern that must start at the epicentre of the VET framework, standards writing.

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