TITLE: WHICH MODELS OF TEACHING AND LEARNING WOULD ENCOURAGE ENTRY LEVEL NUMERACY WBL'S TO ACCESS EDUCATION?

AIMS: TO INVESTIGATE APPROPRIATE TEACHING/LEARNING METHODS FOR WBL'S WHO ARE UNABLE TO ACCESS EDUCATION DUE TO EMPLOYMENT COMMITMENTS.

INTRODUCTION: The national standards for numeracy skills are once again the object of much attention. The Skills for Life Report 2011 highlighted a drop in Entry 3 and above numeracy achievements; Ofsted Report 2011 'Tackling the challenge of poor numeracy skills; the launch of National Numeracy. We are a concerned nation. Kirklees College SAR Report 2011 – work based learning has been targeted to achieve more learners and higher retention.

BACKGROUND: In order to attract more learners and achieve better retention rates, it has been suggested that maybe we should consider delivering an alternative programme of blended learning via our College VLE. Our organisation comes into contact with many businesses who, by virtue of what they do, work long unsociable hours and operate a rotating shift system with variable days off, thus restricting how they access courses with our organisation.

FOCUS GROUP: The Catering Industry: public houses; hotels and restaurants under the geographical jurisdiction of Kirklees Metropolitan District Council in West Yorkshire. Before we could even consider alternative models of learning and teaching, e.g. blended learning, we needed to gather information regarding the following from both employers and employees.

1. **NEED:** Is there a need for numeracy training within the workplace?
2. **BARRIERS:** those perceived to prevent training.
3. **SUPPORT:** available in the workplace.
4. **BENEFITS:** how would both parties like to benefit from training?
5. **ICT:** skills essential for the VLE – is there a need for training?

METHOD: 40 businesses were contacted by telephone and asked if they would take part in our research. Not one of those companies would attend a focus group meeting stating:
…Too busy/not enough time
…Not company related
…Not interested
…Talking is a waste of time, nothing ever gets done.
…**Whilst numeracy IS IMPORTANT**, it is not a priority at the moment. The recession means looking for areas to cut back. They cannot cut back on mandatory training but they can on other things. It is not a legal requirement.

Of the 40 businesses contacted, 13 agreed to be interviewed at their premises. Of that 13, 10 completed and each provided 2 employees to take part. The 3 who did not take part simply could not spare the time or cancelled due to other commitments.

STRENGTHS:
1. Identifies needs and requirements of employers and employees within the local community
2. Identifies perceived barriers to accessing learning through the local College
3. Will provide information to produce a strategy for developing a blended learning approach for hard to reach learners

LIMITATIONS:
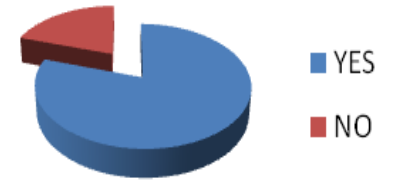1. The research involves a small local geographical area
2. The research only focuses on one industry
3. The research is not extensive and based on the contributions of 10 employers and 20 employees
4. The businesses involved in the research are already engaged in training programmes

SUMMARY OF FINDINGS: WE ASKED EMPLOYERS

Is there a need for numeracy training?

Legend: YES (blue), NO (red)

80% of the employers interviewed believe that numeracy features prominently in the Catering Industry: time; bookings; orders; bills; stock management; cash handling; weights; measures; temperature; ordering produce; costing menus.
50% of the employers interviewed believe their staff to have poor basic numeracy/mental arithmetic skills
30% of those stating that even staff with GCSE maths struggled with good basic skills.
40% of those employers felt that good numeracy skills were important in all aspects of life.
60% of the employers interviewed felt their staff relied too heavily on calculators/tills while
40% of employers interviewed believed that this slows down service resulting in queues and poor customer service.
20% of the employers interviewed believe there is no need for numeracy training just better basic/mental skills.
10% felt skills were redundant in the wake of computerised kitchens and EPOS tills
10% felt that if an employee is still unable to cope with the numeracy aspect of the job by the end of training and the probationary period then clearly they are unsuitable to the position.

EMPLOYERS IDENTIFY BARRIERS TO OFFERING NUMERACY TRAINING

Number	Barrier
10	Recession/cost/cutbacks - who will foot the bill?
8	Rotating shift patterns; variable day off; long unsociable hours. Unable to commit.
3	Remote geographical area - long journey to/from College. De-motivating.
5	Cannot force staff to train. Down to the individual
9	Lack of flexibility of college courses. Staff have to Be flexible for work. Business must come first.
2	Nothing preventing staff attending night school
4	Unable to release all staff on the same day/time

The recession has taken its toll on the local catering industry. All businesses interviewed have felt its affects. They are not as busy and have had to adapt to survive in an attempt to ride it out:
• budget menus;
• extended opening hours;
• moving away from their area of specialism. Versatility they believe will hopefully help them survive.
There is no extra money and there are no extra staff to cover the time and expense involved with numeracy training, particularly as their staff find it nearly impossible to commit to courses offered at present. Just as the industry as had to adapt and be more flexible so have the staff. Rotating shifts, variable days off/no days off (business comes first—we need the money).
We must be adaptable and flexible if we wish to serve the needs of employers and employees within our community.

NUMBER OF EMPLOYERS	TYPE OF SUPPORT OFFERED BY EMPLOYERS
1	Use of computers/premises for study /meet with tutor
4	Staff may use their holidays for exams/study
4	Prepared to move days off for exams/study but cannot guarantee it
2	Would actively encourage by giving time to study/attend exams
2	Would allow space at work to study during breaks
1	Would help with fees
10	Would allow staff to swop shifts, if they could find anyone to swop with
2	Non-committal – would try to work around them but would be difficult

EMPLOYERS SAY: **'BUSINESS MUST COME FIRST'**

EMPLOYEES SAY: **'BUSINESS COMES FIRST - WE NEED THE MONEY'**

Employers were asked to identify how they would expect their organisation to benefit from numeracy training.
1. All employers feel that calculators & tills are time consuming. With better numeracy skills service would be faster and more efficient. Waiting time would be reduced & queues kept to the minimum. Better customer service results in more business.
2. All employers said they would expect greater accuracy. Less waste; mistakes; losses. This all leads to more profit. This is better for business especially in a recession.
3. Half of the employers felt staff would be more confident in their work and therefore find it more enjoyable. We tend to like things we can do.
4. 40% of employers feel staff who develop themselves are perceived to be keen to progress and attract better job prospects: more hours; more money; promotion; better job. It is an attractive quality—they are seen to want to get on.

SUMMARY OF FINDINGS: WE ASKED EMPLOYEES

Do you have a qualification in either maths or numeracy?

Of the 11 that said YES, 5 of those hold GCSE at grade E or below
11 employees said YES
9 employees said NO

Only 6/20 of those interviewed hold GCSE at Grade D or above.

EMPLOYEES IDENTIFY BARRIERS TO THEIR LEARNING

60% felt unable to commit to learning programmes due to rotating shift patterns and long unsociable hours. They are often asked to work at very short notice and have to be flexible for work. Business must come first—they need the opportunity to earn extra money for a variety of reasons
25% worried about the cost of training. Many are working part time and have limited finances
35% expressed low confidence in maths with a fear of failure. They don't like maths or feel they never really understood it.
10% have absolutely no interest in maths at all
10% are single parents with small children and do not want to take advantage of the support they already receive
5% felt too old to study, unaware of the opportunities available to learners of any age or level
30% live in remote areas. With only one day off a week they feel de-motivated at spending large amounts of time travelling and studying

NUMBER OF EMPLOYEES	TYPE OF SUPPORT DESIRED BY EMPLOYEES
7	35% would like to be given time to study and attend exams
8	40% would like employers to be more flexible with shifts/rotas/days off so that they could regularly attend. Blended learning would solve this particular problem
14	70% of the employees interviewed felt that their employer was unable to support them because they feel college courses are not flexible enough. Work comes first.
7	35% would like employers to pay for the training while 10% want to be paid to attend college
2	10% admitted they could actually attend night school as they only work days
2	10% would like their employer to pay them to attend college as part of their working week
3	15% stated their employer could not support them as they are not interested in the training.

NUMERACY TRAINING: WHAT WOULD YOU LIKE TO GET OUT OF IT?

Categories (top to bottom): NOTHING/NOT INTERESTED; CONFIDENCE; BETTER LIFE SKILLS; BETTER JOB PROSPECTS; A GOOD QUALIFICATION. MATHS & ENGLISH ARE ESSENTIAL. Axis 0 to 20.

DO YOU FEEL CONFIDENT WORKING ON COMPUTERS?

Legend: YES 80% (blue), NO 20% (red)

LITERATURE REVIEW

WHAT IS BLENDED LEARNING AND HOW COULD IT HELP IMPROVE ACCESS AND RETENTION?

There is much academic debate surrounding the definition of blended learning but Horn and Staker (2011) provide the following definition:
"Blended learning is any time a student learns at least in part at a supervised brick-and -mortar location away from home and at least in part through online delivery with some element of student control over time, place, path, and/or pace"

Alongside this definition, they have identified 6 major models of blended learning: face -to-face; rotation; flexible; on-line lab; self- blend and on-line driver. Based on their case studies, they believe all may be successful for a variety of reasons.
"….access for all…meets individual needs…self- paced…more stimulating…"(Schulte 2011)

Blended learning offers a wide range of teaching and learning methods that can be tailored to meet the individual student needs. Learners are allowed to self-pace and it is seen to promote success amongst minority and high risk students. It is accessible to all and can be customised for ESOL learners.

It has the potential to be more economical as we already have a VLE and our computers are able to support multi-media programs. It has also been suggested that it requires fewer teachers to supervise students. Economics are high on the agenda. We are in world recession and the geographical area governed by Kirklees Metropolitan Council stands firmly in the top 10% of most economically deprived areas in England. Toni Fazaeli, Chief Executive of the IFL commented on the summary of the Spending Review 2010 for the Department for Business, Innovation and Skills (BIS)
"…FE resource budget will be reduced by 25% by 2014-15…will inevitably involve loss of provision and loss of jobs in our sector, including for teachers and trainers…"
Whilst Horn and Staker (2011) remind us that
"Bleak budgets coupled with looming teacher shortages amidst an increasing demand for results are accelerating the growth of on-line learning into blended environments"

The development of this model's would seriously impact upon the role of the teacher/ tutor in terms of delivering; monitoring progress; offering support; motivating the learner. The successful administration of these courses would require their careful consideration in terms of supporting; promoting and ensuring the learners are acquiring the necessary knowledge and understanding of their subject area; reviewing, recording and monitoring learner performance. An effective yet simple tracking system would need to be adopted.

Resources for the VLE can be a mixture of purchased and developed content. However, Pape (2006) warns us that blended learning is "only as effective as its own online site" but at its best "blended learning extends teaching and learning beyond the classroom walls, developing critical thinking, problem solving, communication, collaboration and global awareness" (Pape 2010).

It is suggested that for blended learning will only be successful if we get the blend right. Too much on-line/alone work can be very de-motivating to the inexperienced learner. Frey (2011) warns us that "students need supervision to make on-line learning work" while Weldon (2011) firmly believes that "Cyber learning is no replacement for the human touch". Studies here showed that learning works best when a tutor is available to assist with only 23% successfully finishing their course when studying purely on -line.

The relevance of this here is that our potential work-based learners may:
Have been out of education for a considerable amount of time
have low self-esteem/low confidence in their ability
have a need for a high level of support
have a need to feel part of the learning and not be alone
not be able to attend regularly
have limited access to computers/signals in remote areas
not be ready to take responsibility for their own learning

The development of this model/s must consider Maslow's Hierarchy of Needs (Maslow, 1970) when dealing with minority or high need students whose confidence, self- esteem, motivation and attitude may represent personal barriers to learning. Feelings of low confidence, fear of failure must be supported in order for them reach 'self- actualisation' and even begin to think about succeeding. Some will need constant reassurance. Some will be capable of independent learning and others may still not reach this status by the end of their numeracy course.

National Numeracy, launched this year, aims to change attitudes to maths and numeracy. Unfortunately for millions of adults and children in the UK today, 'I can't do maths' has become a self-fulfilling prophesy. Many of our potential learners have their own issues with numeracy: can't do it/don't like it/I'm thick/I was rubbish at this at school:
"This self-fulfilling prophesy is one reason why we focus on attitudes as part of our campaigning. We believe that changing attitudes will in turn influence behaviour and ultimately skill levels"
(National Numeracy, 2012).
We too need to promote this change in attitude.

BIBLIOGRAPHY

Horn, M and Staker H (2011) The Rise of K12 Blended Learning, Chapel Hill, NC: Innosight Institute, Jan 2011
Kelley, C (2011) "Blended learning Programs" Hanover Research Washington September 2011
Loveys, K (2011) "It doesn't add up: We're even worse at maths than Albania as UK schools rank 43rd in the world"http://www.dailymail.co.uk/news/article-2035205/It-doesnt-add-Were-worse-maths-Albania-UK-schools-rank-43rd-world.html
Maslow, A (1970) Motivation and Personality, 2nd ed. New York: Harper & Row.
National Numeracy press release, 28th February 2012 accessed on http://www.nationalnumeracy.org.uk/news/9/index.htmlindex.html accessed March 3rd 2012
Ofsted Report 2011 "Tackling the challenge of poor numeracy skills - why some teaching and learning adds up while other provision falls short" accessed at http://www.ofsted.gov.uk/.
Orr, K. (2008). Room for Improvement? The impact of compulsory professional development for teachers in England's further education sector. Journal of In-Service Education, 34, No1, 97-108
Pape, L (2010) Blended Teaching and Learning, The School Administrator, 67.4, April 2010
Pape, L (2006) "From bricks to clicks: Blurring classroom/Cyber Lines" The School Administrator 63.7, August 2006
Rake, M (2012) National Numeracy Report 2012 http://www.nationalnumeracy.org.uk/news/9/index.htmlindex.html accessed March 3rd 2012
Shepherd, J (2010) "World education rankings: which country does best a reading, maths and science"http://www.guardian.co.uk/news/datablog/2010/dec/07/world-education-rankings-maths-science-reading#data accessed March 4th 2012
Schulte, B (2011) "Clicks get bricks" Harvard Education Letter 27.4 July/August 2011, P2
Skills for Life Report 2011 accessed March 8th www.bis.gov.uk/.../11-1-587-2011-skills-for-life-survey-findings.
Weldon, T (2011) "Cyber learning no replacement for the human touch studies show" mhtml:file///J:\Cyber learning no replacement for the human touch, studies show/CSG knowledge Centre October 6th 2011

RECOMMENDATIONS

1. To respond to market conditions the college needs to develop a very flexible portfolio of options/models of delivery with the development of a blended learning programme.
2. The success of the models will be dependent on the careful initial assessment of both employer and employee. This is crucial so as to select the most appropriate model/option.
3. Flexibility of delivery is essential so as to offer differentiation in support dependant upon the learners' needs.
4. Regular review would ensure that the model of learning selected is appropriate and would allow learners the ability to move between models
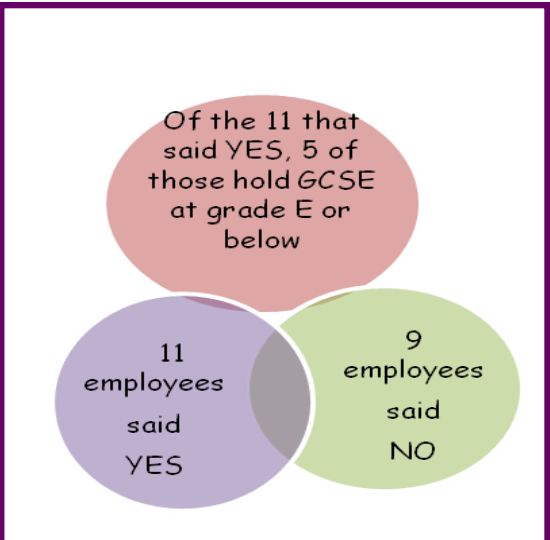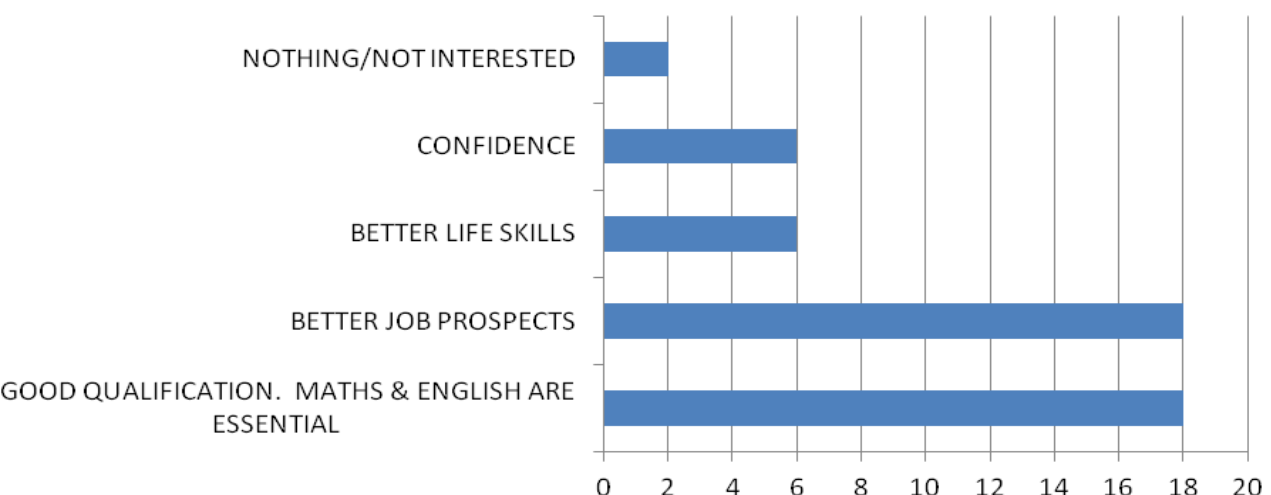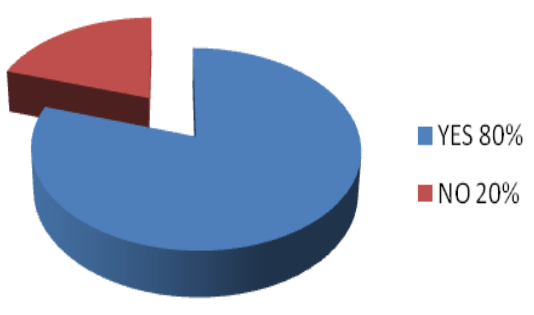
TIMELINE:……………..Jan 23/24: Coventry. Title & draft poster……….By Jan 31st: contact Batley Campus for list of hotels etc & produce first draft of questionnaire……By Feb 7th: finalise questionnaire……….By Feb 14th: finalise details for venue of focus group meeting……By Feb 26th: Contact 40 businesses by telephone……By Mar 11th: correlate all findings of employers/employees & produce draft poster…….By Mar 12th: meet CW to discuss findings and how to present them…….By Mar 16th: put together rough draft poster for working document for Coventry. Meet with CW…BY MARCH 19TH present draft findings at WARWICK UNIVERSITY

KIRKLEES COLLEGE

Sabina Fryer and Catherine Walton
Skills for Life (Work based learning)
Kirklees College
New North Road, Huddersfield HD1 5NN
SFryer@KirkleesCollege.ac.uk
CWalton@KirkleesCollege.ac.uk

KEY WORDS…………………………NEED FOR NUMERACY TRAINING……. BENEFITS OF TRAINING…….BARRIERS TO LEARNING…….EMPLOYER/EMPLOYEE MOTIVATION………ICT SKILLS…….BLENDED LEARNING