

Committee(s):		Date(s):
Finance Committee	For Decision	27 th May 2014
Subject: City University maths project – Release of year two funding		Public
Report of: Town Clerk		For Decision
Summary		
<p>In August 2012 this Committee agreed under urgency powers to award City University with a three-year grant of £181,000 to undertake a maths programme with the City of London Academy Islington. Following the first year, funding for subsequent years was conditional on an annual evaluation report being submitted. The year 1 evaluation report is appended to this report.</p>		
<p>The programme deployed 20 City University undergraduates into the Academy to tutor targeted groups of students that were achieving grade C or below at GCSE mathematics. Feedback from academy students demonstrates that the project has made an impact in enthusing Academy students towards the study of Mathematics. Following feedback from students the following was noted:</p>		
<ul style="list-style-type: none"> • 87% of year 11 pupils reported that they found their student tutor helpful in motivating them in their studies. The project provided with an additional intervention opportunity to support learning in Math - at a pace suited to the needs of student. • Initially, 76% of year 11 students and 52% of year 10 students said that the found mathematics to be a difficult subject. After the tutoring began, the majority agreed that mathematics was not such a hard subject and, they saw that they could improve with the additional help provided by their tutors. • Anxiety about examinations eased with 67% of year 11 and 76% of year 10 students reporting they were confident about their upcoming exam. 		
<p>The first year of this project has proved to be a successful start - providing a helpful addition to the range of work undertaken by the Academy to support improved attainment. This has been reflected in the increase in GCSE maths performance from the previous year.</p>		
Recommendation		
City University are requesting that Members release the year 2 funding of £60,000.		

Main Report

Background

1. In 2011 only 31% of pupils at the City of London Academy Islington (COLAI) gained 5 or more GCSE passes (grades A* to C). This placed the school in the lowest 100 performing schools in England for 2011. City University applied for three-year funding to run a project that utilises City University's expertise in mathematics to improve the standards of numeracy and maths at the Academy.
2. The project has the following aims:
 - **Better Academy Results:** To improve levels of attainment in Mathematics and numeracy within the Academy by working with able students and identified (borderline) students who were not fully realising potential to achieve better results at GCSE examinations.
 - **More Academy students studying Mathematics:** To encourage and route greater numbers of Academy students towards the study of Mathematics in Further and Higher Education (City University and/or other FHE institutions).
 - **Utilising City University's strength in Mathematics for the Academy:** To direct City University and other specialist HE Academic expertise in Mathematics to support teaching staff in the Academy thereby further developing subject knowledge and enhancing teaching practice.
 - **City University Students routed towards teaching:** To actively support and develop City University students towards careers in the teaching of Mathematics.
 - **Opportunities for City University students to make even greater contribution to the Community:** To offer City University students opportunities to enhance their skills and make a significant contribution to education within local communities.

Current Position

3. The first year of the project has finished and the evaluation report is appended to this report. Over the past year City University has supported the teaching staff at COLAI and deployed City University students as paid mentors to encourage and motivate Academy pupils and in particular those with the ability to achieve good grades and go on to further and higher education.
4. GCSE grades, A*-C with English and Maths, have improved from 32.7% in 2012 to 61% in 2013, with maths alone seeing a comparable and significant jump.
5. The programme coordinators gathered feedback from COLAI students, City University mentors and staff. These results can be found in paragraph 5 of the attached appendix. The feedback demonstrates that the project has made an impact in enthusing Academy students towards the study of mathematics.

Proposals

6. City University are seeking the second tranche of funding, amounting to £60,000, to run the second year of the programme.

Conclusion

7. The evaluation report shows that the first year of this project has proved to be a successful start - providing a helpful addition to the range of work undertaken by the Academy to support improved attainment. This has been reflected in the increase in

GCSE maths performance from the previous year.

8. City University are requesting that the second tranche of funding is released to run the second year of the project.

Appendices

Appendix 1 - City University Mathematics Project – Evaluation: Year 1.

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Appendix 1: City University Mathematics Project – Evaluation: Year 1



City of London Academy, Islington

Mathematics Project

Evaluation Year 1

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2012/2013**

City University London and City of London Corporation working to improve mathematical ability and numeracy of students at the City of London Academy Islington.

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1. Introduction

This report provides an evaluation of the first year of a City of London funded project - providing support for the City of London Academy, Islington. Utilising the academic strength of the Centre for Mathematical Sciences at City University London, the project deploys undergraduate student tutors, fully supported by academic staff of the Centre of Mathematical Sciences, providing direct support to Academy students. This project seeks to contribute toward the Academy's extensive work in achieving step change improvements in numeracy - visibly demonstrated through improved attainment in Mathematics:

The Academy and City University is grateful to the City of London for their considerable financial support, oversight and input throughout the course of the project, without which, year one of the project would not have been successful.

2. Project Aims

The project has a duration of 3 years. The agreed aims of the Project over this time frame are to contribute towards:-

- **Better Academy Results:** To improve levels of attainment in Mathematics and numeracy within the Academy by working with able students and identified (borderline) students who were not fully realising potential to achieve better results at GCSE examinations.
- **More Academy students studying Mathematics:** To encourage and route greater numbers of Academy students towards the study of Mathematics in Further and Higher Education (City University and/or other FHE institutions).
- **Utilising City University's strength in Mathematics for the Academy:** To direct City University and other specialist HE Academic expertise in Mathematics to support teaching staff in the Academy thereby further developing subject knowledge and enhancing teaching practice.
- **City University Students routed towards teaching:** To actively support and develop City University students towards careers in the teaching of Mathematics.
- **Opportunities for City University students to make even greater contribution to the Community:** To offer City University students opportunities to enhance their skills and make a significant contribution to education within local communities.

3. Background Information/Context

The City of London Academy is situated in the St Peters Ward of Islington. The Academy is sponsored by City University and The City of London Corporation.

The Academy launched in 2008. It is housed in a new building, which was completed in 2010 and has Richard Cloudesley, a local authority special school co-located on the site. Islington is the 14th most deprived Borough in the country and the 5th most deprived in London. The St Peters Ward, in which the school is situated, suffers from high levels of unemployment – 15% compared to 12% nationally, with 1/6 of households with an income under £15K per year. There are also low levels of historical household educational attainment, with the ward being the second worst in Islington. Crime in the area immediately around the school is high with St Peters having levels of robbery which rank it as the second worst in the Borough, and the fourth worst for criminal damage. In relation to health statistics the average life expectancy in the ward is 5 years lower than the national levels and the incidence of mental health illness are significantly higher. (*Source: St Peters Ward Profile 2011 - Islington Council.*)

The Academy is an 11-19 school with 120 students in each year group in years 7–11 and 85 students in the Sixth Form. Approximately 58% of Academy students are boys, with approximately 57% receiving free school meals. There are 69% of ethnic minority students, and 20% are statemented or on School Action Plus, with approximately 36% in total on the code of practice. The highest proportion of special needs students are those with emotional and behavioural difficulties. The levels of deprivation experienced by students is approximately 2.5 times the national average with the Academy having a deprivation index of

0.54 compared to 0.21 nationally. Typically students enter the Academy with prior attainment levels significantly below national averages. The percentage of low attainers in each year cohort is approximately twice the national average, and consistently around 36%.

The Academy's Vision is to be an outstanding Academy; with a total commitment to improving the lives of the young people of Islington by serving the local community as a vibrant centre of learning, known for our academic excellence and our unrelenting determination for everyone to succeed.

The Academy's results were a significant disappointment in 2011. However, the current leadership and management are making a significant difference. In November 2012, OFSTED found that the Academy was a 'Good' school with the capacity to be Outstanding. The GCSE Results for 2013 (published in August 2013) demonstrated significant improvement in levels of attainment

5 A*-C with English and Math = 61% (33% in 2012)

Students made outstanding progress in this year. The results are the Academy's best ever examination results by far. The student's higher academic achievement was the result of hard work throughout the year on the part of students and the staff of the Academy - who delivered a raft of significant changes within the Academy to raise standards. This project formed one component part of this work.

4. Summary Project Description

As part of a range of actions taken to support the Academy's agenda for improvement, City University was invited to utilise the expertise available within the Centre for Mathematical Science and direct undergraduate student tutors for a project to help the Academy in its work to raise mathematical ability and numeracy.

The project deployed 20 City University undergraduates into the Academy to tutor targeted groups of students that were achieving grade C or below at GCSE mathematics.

As part of the project, City University established a partnership with **Teach First**, the organisation that trains and supports Graduates with leadership potential to become inspirational teachers in schools across the UK. to assist with implementation of the project. Teach First provided the University students with additional training on tutoring together with sessions promoting teaching as a career.

City University was able to draw on the experience of a successful and well established tutoring scheme - where students are deployed across London schools to tutor a variety of subjects. The Math Project used the outline of this successful model to create a unique and bespoke tutoring scheme that directly caters for the Academy's needs.

4.1. Delivery of Student Tutoring

The student tutoring opportunity at the Academy was advertised to City undergraduate students by the University's Widening Participation and Outreach team. This took the form of short presentations to students studying subjects that contained significant elements of mathematics. The opportunity was also advertised via email to a pool of student ambassadors (students trained to undertake voluntary and ambassadorial work).

40 students applied to take part in the project, 28 were short listed for interviewing of which 20 were successful. Each shortlisted applicant was interviewed and selection was made using the following criteria:

- Students that demonstrated a real passion for math;
- Students that had an interest in, had previously worked with or enjoyed working with young people;
- Students with excellent communication skills – who were articulate and confident during the interview
- Students that demonstrated the ability to draw on their own experiences of mathematics at GCSE and relate this to pupils who may be struggling in their studies.

Each successful student tutor then received training relating to child protection and how to work with young people. All participating students were cleared through the Disclosure and Barring Service (DBS).

Student tutors were deployed to work with Key Stage 3 (year 10) and Key Stage 4 (year 11) pupils. A total of 96 students (36 year 11 pupils and 60 year 10 pupils) from the Academy participated in the project and were tutored in Mathematics for up to 2 hours on a weekly basis.

4.2. Teach First Seminars

Teach First provided valuable input and support by delivering 4 bespoke sessions throughout the course of the project. The overall goals of these sessions were to help the student tutors understand how to explain concepts and strategies; support young people effectively; and encourage student tutors to give serious consideration towards a career in teaching. A detailed list of the sessions offered by Teach First can be found in the appendix.

4.3. Mathematics Residential Weekend

In addition to receiving tutoring, 26 year 11 pupils attended a Mathematics Residential with 5 of their teachers at the beginning of March 2013 - a short time before they were due to sit their public GCSE examination in Mathematics. The students spent the weekend at Cardfields Education Centre that provides educational and recreational support for schools. During the Residential, Academy pupils received over 24 hours of Mathematics revision.

Those pupils who attended the Mathematics Residential were part of a 'target group' that were forecast to achieve between grade D/E in their GCSE and were considered borderline students. As well as improving attainment, the goal of the Mathematics Residential was to boost self-esteem and confidence in preparation for the upcoming exam.

A range of topics were covered based upon the past exam papers. The pupils were divided into four groups: two following the higher tier GCSE math syllabus and two groups following the foundation tier GCSE math syllabus. Students were taught in carousel style where each teacher was assigned to teaching a set block of topics. On the final day of the Mathematics Residential the pupils sat a practice mock exam to assess progress.

Feedback from staff and students was that the residential was a success. Students came back feeling motivated and enthused towards the impending examination. The carousel style teaching enabled students that were struggling with specific topics to spend more time refining their understanding. Intense revision sessions allowed for deeper learning.

4.4. Project Steering Group/Governance

At the outset, the project established a steering group consisting of the following:

- Di Smith, Academies Adviser, City of London.
- Zohra Moledina, Partnerships Officer, City University London.
- Eamon Martin, Director of Educational Relationships City University, London.
- Dr Anton Cox, Head of Centre of Mathematics, City University London.
- Members from Widening Participation and Outreach team at City University London.
- Sophie Galley, Teach First.
- Kunal Vora, Head of Mathematics, City of London Academy, Islington.
- Akram Tarik, Vice Principal, City of London Academy, Islington.
- Karan Pattni, Project Evaluator, Centre of Mathematical Sciences, City University London.

Regular meetings of the Steering group were held to monitor project delivery; assess progress being made, address logistical and operational issues and resolve any concerns raised. These meetings proved to be effective. At the outset of the project, a number of (teething) operational issues were identified that required intervention by the Project Steering group.

- Compatibility of Academy and University terms: The Academy operates teaching over 39 weeks and the University for 24 weeks. With four weeks dedicated to holidays and five weeks dedicated to exams this resulted in only 15 out of 39 weeks available for direct contact, teaching, outreach and intervention from City University students tutors. The number of dates compatible for both parties were less than originally envisaged. In response to this, the Steering Group was able to direct project resource for a Mathematics residential weekend for Academy students. This weekend proved to be of significant value to students in their preparations for GCSE examinations
- Later start date for Project: The confirmation of project funding came in October 2012, and this allowed less than optimal time for recruitment, training and the deployment of students. Tutorial sessions began from January 2013 (once the selection process had been completed) - allowing for a total of 12 tutorial sessions, one drop down mathematics revision day and one mathematics residential.

5. Summary of feedback and responses

5.1. Academy student responses/perceptions

The project evaluator collected information from the participating Academy students at the beginning and the end of the project. This enabled a careful comparison to be made with regards to students' attitudes toward Mathematics and Higher Education at the beginning and end of the project. A detailed compilation of responses is set out in the appendix.

Broad conclusions drawn from the feedback are:

- 85% of year 11 students and 69% of the year 10 students were new to the student tutoring experience. These students recognized that they required extra support - but lacked confidence in seeking help from their mathematics teacher or parent. The project provided a valuable opportunity for Academy students to reflect on the difficulties they faced. 87% of year 11 pupils reported that they found their student tutor helpful in motivating them in their studies. The project provided with an additional intervention opportunity to support learning in Math - at a pace suited to the needs of student.
- Initially, 76% of year 11 students and 52% of year 10 students said that they found mathematics to be a difficult subject. After the tutoring began, the majority agreed that mathematics was not such a hard subject and, they saw that they could improve with the additional help provided by their tutors. Despite having ability, many students appeared to be demotivated when studying mathematics - because they thought it was difficult. The project helped to address this by providing students with an avenue of extra support. The project appears to have played a part in boosting confidence and motivation towards learning in mathematics. Anxiety about examinations eased with 67% of year 11 and 76% of year 10 students reporting they were confident about their upcoming exam.
- 84% of the year 11 and 85% of the year 10 students agreed that student tutors presented learning material clearly. This is a positive indication of how highly Academy students valued the one-to-one /small group attention received. The project was designed such that each tutor worked with a maximum of three students at a time. This allowed them to form effective working relationships. In fact, any changes/redeployment of the tutors was generally met with a negative response from the Academy students. The development of an effective learning partnership between Undergraduate students and the Academy students proved to be a strong and positive feature of the project.

5.2. City University students responses to the Project

Feedback from City University tutors was collected at the end of the project to evaluate their experience. A detailed compilation of their responses is in the appendix.

Broad conclusions drawn from the feedback are:

- Undergraduate student tutors valued the training and support offered to them in this project. In particular, the training - providing guidance and support on the most effective tutoring methods – was highly valued as it taught students how to break down topics into smaller manageable concepts.
- Those undergraduate student tutors who are considering teaching as a career indicated that they are now more confident to go on and pursue this career path.
- This project has given University students an opportunity to make a difference to the lives of other students - by helping them get the most out of their education. Many of the tutors flagged that they were in a similar position to their students during their own GCSE's,
- The Undergraduate student tutors served as excellent role models – in their behaviours, and in demonstrating that Higher Education could be an attainable goal with consistent application and determination.

5.3. Participating Staff

The participating staff (Academy, Islington and other participants)were asked for their feedback at the end of the first year of the project. A number of conclusions can be drawn from their feedback:

- Academy, Islington staff were very positive about the impact of this project – confirming that it had been helpful in their work to raise standards.
- The project had helped to raise the self-esteem of students at the Academy.
- Student tutors had delivered effective provision with 1:1 and 1:3 groups being established to support and reinforce concepts and learning.
- The Math residential provision for Year 11 had been effective in supporting student's revision and preparation for examinations.
- The tutors were recognised to be of high calibre that had an enthusiasm for mathematics. They helped change a number of pupils' perceptions about the study of mathematics.
- The Steering Group was effective. The Group identified issues that arose during the year and provided effective solutions. A troubleshooting mechanism that proved useful throughout the project.
- It will be useful to highlight one or two 'case studies' of individual University and Academy students showing how the project has been of benefit to them as a means of further demonstrating the value of this initiative (this will be done as part of the second year of the project).

6. Conclusion

The first year of this project has proved to be a successful start - providing a helpful addition to the range of work undertaken by the Academy to support improved attainment. Academy GCSE results over this period showed significant improvement from the previous year. The credit for this performance rests with the Academy students; together with the Senior Leadership Team and all the staff of the Academy – all of

whom are to be congratulated. The project has played its part - as one component of a raft of actions taken to help students succeed.

Feedback demonstrates that the project has made an impact in enthusing Academy students towards the study of Mathematics.

The project has been of direct benefit to City University students - in enhancing their tutoring skills; encouraging them to think positively of a career in teaching; and in enabling them to make a real contribution to education within the local community in Islington.

We look forward to the continuation of this project in Years 2 and 3.

7. Appendix

7.1. COLAi Student Feedback

7.1.1. Pre-Evaluation Questionnaire Year 11

Response Rate: 33/37 (89%)

Equality and Diversity	
White - British	52%
Black - Caribbean	9%
Mixed	9%
Turkish	9%
Black - African	6%
White - Irish	6%
Bangladeshi	3%
Slovakian	3%
Other	3%

Part A	Yes	No	Not Sure
One or both of my parents have been to university.	13%	42%	45%
One day I would like to go to university.	61%	9%	30%
Have you ever been tutored before? (Not this programme, but generally).	15%	85%	-
Do you find that mathematics is a difficult subject?	76%	24%	-

Part B	Totally Agree	Agree to some extent	Unsure	Disagree to some extent	Totally Disagree
Having a student tutor in class will make me more likely to go to university.	27%	24%	42%	0%	6%
I am looking forward to working with my student tutor	63%	31%	6%	0%	0%
Having a student tutor in class will help my motivation.	48%	39%	12%	0%	0%
Having a student tutor help me in class will make me more confident.	48%	30%	21%	0%	0%
Having a student tutor will help me to develop revision skills and exam technique.	61%	36%	3%	0%	0%

Having extra help will help me get good grades. **58%** 36% 6% 0% 0%

How have you been dealing with your difficulties in mathematics?

49% said they have been revising.

I've put in more effort.

More revision will help me in math.

Extra revision in the mornings.

I have been trying to come back after school for extra math.

Attending morning math classes.

After getting my results for my November exam, I have been revising at home more than usual.

I have been dealing with my difficulties in math by revising at home.

Trying my best to put more effort.

By getting on with it.

Revision morning 08:00 am. If I don't understand my work, I will speak to my teacher.

I have been more concentrated in lessons and I'm trying to revise more.

I have extra sessions in math which have made me have a better understanding.

I attend a morning math group every day from 8 to 8:40.

I have been dealing with them by doing morning classes and after school classes which help me concentrate more and focus on my work.

Attending morning revision classes and revising at home.

9% said they would seek help.

Asking teacher for help.

Not really but I need some help to develop my grades.

I have had some difficulty in math and hopefully by having a student mentor I will achieve good grades.

42% did not say what they would do.

I have been doing alright it's just that I forget a lot.

I find it hard to remember stuff in exams, and I hardly revise.

Yes, sometimes I find it hard to understand some things.

I am alright at certain stuff in math e.g. algebra.

What do you hope to gain from the scheme?

A better grade in mathematics.

A C grade.

Better grade.

To try to get a higher grade.

I hope I will get better at my math.

A C in my exam.

Achieving at least a grade C.

I hope to get a B grade.

To achieve a C grade.

I hope to gain higher grades, and gain more confidence in math.

Better grades, confident in math.

I hope to gain a grade C in math.

Learn more math.

Improvement in my understanding in math.

To get to know my tutor and succeed in my future exams.

To get better with math.

New Skills.

Build my confidence, learn something new.

A better understanding when doing math.

I hope I learn more topics and become more confident with math.

Better Understanding in math.

A better understanding about graphs and algebra.

Everything that I didn't know.

I hope to gain more understanding on math as a subject in order to pass my exam.

Learn more and understand more.

I hope to gain confidence.

Learn and improve on my math, and try more difficult things.

I will do better at math and learning how to do different math methods.

Confidence in math.

What are your career ambitions?

Music Producing; Journalism; Lawyer; Rugby coach; Professional Rugby player; Gym Instructor; Electrician; Plumber; Mechanic; IT; Go To College; Child Care; Health and Social Care; Social Work with Children; Support Worker; To be rich; Professional Vocalist; Music Teacher; Young Offender's; Team Worker; Youth Worker; Musician; TV Presenter; Dancer; Construction; Civil Engineering; Business Teacher; Businessman; Career out of Media Studies; Actor; Theatre; Directing; Go to 6th form.

7.1.2. Pre-Evaluation Questionnaire Year 10

Response Rate 43/60 (72%)

Equality and Diversity	
White - British	23%
Black - African	19%
Mixed	12%
Black - Caribbean	12%
Other	10%
Bangladeshi	7%
Turkish	5%
White - Irish	2%
Serbian	2%
Indian	2%
Chinese	2%
Albanian	2%

Part A	Yes	No	Not Sure
One or both of my parents have been to university.	37%	37%	26%
One day I would like to go to university.	67%	2%	30%
Have you ever been tutored before? (Not this programme, but generally).	31%	69%	-
Do you find that mathematics is a difficult subject?	52%	48%	-

Part B	Totally Agree	Agree to some extent	Unsure	Disagree to some extent	Totally Disagree
Having a student tutor in class will make me more likely to go to university.	14%	23%	33%	19%	12%
I am looking forward to working with my student tutor	53%	37%	9%	0%	0%
Having a student tutor in class will help my motivation.	23%	26%	35%	16%	0%
Having a student tutor help me in class will make me more confident.	19%	40%	28%	12%	2%
Having a student tutor will help me to develop revision skills and exam technique.	42%	47%	9%	2%	0%
Having extra help will help me get good grades.	47%	51%	0%	2%	0%

How have you been dealing with your difficulties in mathematics?

37% said they have been revising:

By working on my math.

Been revising more.
Revision.
By revising the topics I have trouble in.
Revising math at home.
I revise at night.
I revise I am dealing with math okay.
Revising.
Revise and answer questions.
I have revised at home.
Revising, asking my tutor.
Revising over topics that are difficult.
I tried to revise but I find it very hard to concentrate and do so.
I usually revise at home using My Math and the Math Watch CD.
Looking and trying to find the subject on the Math Watch CD.
Doing a bit more of my own research, reading books about math.

7% said they would seek help:

Asking my tutor.
Asking my dad.
I've found it difficult in the beginning and I still do find it difficult, but I just ask for help or go on math resource and sites.

7% said they attend before and after school classes:

Yes I have been going to morning classes to help me with this.
Before and after school classes.
I have been going before and after school on most days to help me in math.

7% use other sources:

Try online math through My Math or YouTube.
I use what my math teacher gave to me.
Haven't really as there hasn't been a proper way, just using the math CD.

42% do not do anything or did not say.

I haven't, I just procrastinate.
I haven't been.
I just shut off and don't bother.
Nothing.
I haven't had much difficulty.
Haven't got round to them yet.
I haven't but I will start.

What do you hope to gain from this scheme?

A great chance of getting an A.
An A* in math.
At least A or B in math.
An A*.
A*.
Better grades.
I hope this scheme improves my grade.
An improvement in my grade.
Pass my GCSEs.
Extra support.
Better understanding of the subject.
Motivation, help etc.
Improvement in my math skills.
Finding an easy way to solve hard equations.
A better understanding in math.

Extra revision and learning.
A better understanding of the subject.
I'll like to get more familiar with different topics in math.
Knowledge.
I hope to gain more knowledge on geometry and shapes.
More knowledge.
Knowledge, confidence.
Get better at math.
To have a better understanding of some of the topic I don't understand.
Confidence.
To be able to figure out things more easily and understand more easily.
Develop my skills in math.
More knowledge.
Knowledge.
Understand math better.
Better understanding in the subject.
More techniques on math.
Better understanding.
To improve my math skills.
I hope to learn things that I would have found difficult otherwise.
More knowledge and to be more confident doing math.
A solid understanding of the topics.
The ability to do shapes.
Better understanding in topics I'm not comfortable with.
Nothing.

What are your career ambitions?

Accountant; Actor; Animator; Architect; Artist; Banker; Child doctor; Designer; Doctor; Electrical Engineer; Engineer; Find a job in the science field; Forensic Scientist; Formula 1 driver; Go to university and get my certificates; Law; Mechanical engineering; Midwife; Musician; Not sure/still deciding; Pilot; Psychologist; Web Designer; Work in business; Work in the film industry; Work with kids.

7.1.3. Post Evaluation Questionnaire Year 11

Response rate: 30/37 (81%)

Part A	<i>Yes</i>	<i>No</i>
Are you confident about the upcoming exam?	67%	33%
Was the tutoring as you expected?	73%	27%

Part B	<i>Totally Agree</i>	<i>Agree to some extent</i>	<i>Unsure</i>	<i>Disagree to some extent</i>	<i>Totally Disagree</i>
I feel more motivated about learning mathematics.	13%	53%	17%	10%	7%
My exam grade will improve because of the tutoring.	33%	30%	23%	7%	7%
Mathematics is not a hard subject. Instead, I can do well with the right amount of help.	17%	57%	17%	3%	7%
Since the tutoring began, I prefer asking my tutor for help.	17%	13%	37%	17%	17%
My tutor presented the material clearly.	42%	47%	9%	2%	0%

What did your tutor do best?

The way they broke down the questions.

Explain in detail.

Explaining the work.

Explain.

Explained well.

They explained things very clearly.

My tutor explained how to solve specific questions in a way that I understand.

Made us understand fully instead of moving on to other subjects.

My tutor has helped me to understand different topics thoroughly.

Guided through the parts I didn't understand.

Listened to us and was patient.

Went at a pace I understood.

It was better than expected.

Everything.

Suggest how we can improve:

Not on a Wednesday.

More help.

More help in lessons.

They kept changing tutor and some of them I had I wasn't comfortable.

Better people who can teach.

Explain things a little better.

Don't send weird people.

Offer more rooms so less people in one class.

How has your tutor helped you?

35% of the comments mentioned increased confidence:

Made me more confident.

More confident on answering questions.

I wasn't confident in plotting on graphs and my tutor helped me improve on that.

Made me feel confident in math.

Made me confident.

Confidence.

More confident.

Helped me feel a bit more confident about the exam.

Broke the stuff I can't do down to make it easier and went over stuff I could do to help me improve and become more confident.

He has made me more confident when doing math.

My tutor has helped my gain confidence in doing well in math.

He made me more confident in doing math.

I am a better learner and more enthusiastic about math.

35% of the comments mentioned improved understanding:

They were very helpful due to the way they helped me and how clearly they explained the work.

My tutor has helped me to understand different topics thoroughly.

He was also very understandable and also the way he taught was good.

Made everything clear.

She made everything clearer.

Helped me understand linear and quadratic equations.

My tutor has helped me understand the difference between e.g. equations, and how to apply the correct equation the correct question.

Gave me a better understanding.

Explained the math sums to me properly.

Made it easier to answer the questions.

Understand the question more.

My tutor has helped me break down the question.

He clearly explained how to work out tricky questions.

18% of the comments mentioned being taught different techniques:

Taught me a different way of solving problems.

She also helped me to use special techniques on how to answer simultaneous equations.

I can now work out math questions by using many methods.

Taught me new ways of solving questions.

Showing me different method how to solve problems.

Help me to understand different techniques.

Got through a lot of math, learnt new skills.

Other comments:

They were good at pointing out my weaknesses and helping me improve them.

Related to my problems and helped me understand clearly at my pace.

Helped with some skills in math.

She challenged me with high grade questions (which are a good thing, because now I know I can achieve higher grades).

She's fun to work with.

7.1.4. Post Evaluation Questionnaire Year 10

Response Rate 21/60 (35%)

Part A	<i>Yes</i>	<i>No</i>
Are you confident about the upcoming exam?	76%	24%
Was the tutoring as you expected?	67%	33%

Part B	<i>Totally Agree</i>	<i>Agree to some extent</i>	<i>Unsure</i>	<i>Disagree to some extent</i>	<i>Totally Disagree</i>
I feel more motivated about learning mathematics.	29%	52%	10%	5%	5%
My exam grade will improve because of the tutoring.	14%	62%	14%	10%	0%
Mathematics is not a hard subject. Instead, I can do well with the right amount of help.	24%	52%	10%	10%	5%
Since the tutoring began, I prefer asking my tutor for help.	19%	48%	14%	14%	5%
My tutor presented the material clearly.	33%	52%	10%	5%	0%

What did your tutor do best?

- Her writing it down had helped me a lot, also the way she explained it.
- Explaining really helps me learn.
- He explained the things I didn't know in detail.
- Explained methods and gave useful tips.
- Help me and showed me through explaining.
- Clear explanation.
- Their explanations and the methods of solving any problems.
- Explained questions clearly and gave help when needed.
- Continue to teach properly and explain things properly.
- She kept on trying to explain even after explaining it more than 3 times.
- He made me understand things I have not come across yet in class.
- Helped me to learn new ways of answering questions.
- He helped us with the questions.
- They talked us through the questions that were hard to understand.
- Went through how to check my answers.
- They provide significant support.
- Giving me some advice on how to work things out easily.
- Worked things out in a style I like and showed me step by step.
- Helped me when we were unsure about some questions.

Suggest how we can improve:

- Finish earlier.
- An easier way for us to understand.
- Explaining and presenting things on the board.
- Be more prepared question wise.
- A range of questions from A*-D grade.
- Stick to one tutor the whole time.
- Learn new subjects instead of revising over everything again and again.

How has your tutor helped you?

35% of the comments mentioned increased confidence:

Made me feel more confident in math.

Improved confidence.

Become a little more confident with my answers.

Also helped us on any question we weren't confident on.

35% of the comments mentioned improved understanding:

Made me understand things I have not come across.

Explaining and writing it down.

Help if you're confused.

Improved understanding.

Helped me understand certain methods easier.

Explained things in an easy way.

Understand things I usually don't.

Better understanding.

My tutor has explained questions and methods I was unsure about.

Understand things more.

I feel more knowledgeable about quadratic equations.

18% of the comments mentioned being taught different techniques:

Methods for working out.

Helped me learn new math techniques.

Other comments:

Clear in speaking which is good.

How to get full marks.

Told me where I'm going wrong and corrected me.

Strengthened my abilities.

Talked through questions.

With formulas needed for specific questions.

Learnt new things.

Finding the value of x in an equation.

How to work out the ratio.

They have prepared us for the upcoming test.

Helped me revise methods and formulas.

Worked things out the way I liked.

7.2. Tutor Feedback

What skills have you gained from the tutoring experience?

All tutors said they improved their communication skills, some comments are:

"...being able to explain mathematical concepts in a way that students can understand easily and grasp the material..."

"...I learned how to approach the age group (year 10 and 11) I was tutoring, so that they are more interested and feel more motivated."

Are you considering teaching as a career once you have finished your studies? If so, did participating in the tutoring project influence this decision and how does it help you prepare for this career?

50% of the tutors said they would consider teaching as a career:

"I am considering teaching as a career and I think the project has given me the confidence to be able to teach in the future. I would say that the project has made me more likely to go in to teaching over other jobs."

"From a young age, mathematics and numbers have always played a big part of my life, and I wanted to share my enthusiasm with other young people. I also wanted to show the pupils, especially the ones who hated math, that it can be an enjoyable and stimulating subject."

In what ways have you contributed to the community by participating in this project?

All tutors mentioned helping struggling students perform better and the knock on effect this has in terms of improving the community:

"...by giving up some time to tutor pupils that are very keen to learn and want to do well in math. I hope that after we have tutored the pupils, they will go on to college and university, to study what they are passionate about and become successful individuals in the future. In terms of my own community where I live, in Kent, I haven't done any tutoring as of yet, but I have applied for a few job roles in math tuition centres, so hopefully, with the skills and experience I've gained at COLAi, that will make me a desirable candidate."

Were you upset about anything and how do you think we can improve?

A third of the pupils were upset about the changing of their pupils:

"...Even though I have no issue with tutoring another pupil, I think in some ways it's better to have the same pupils throughout the year as you get to know their strengths and weaknesses properly."

Are you going to participate in the project again next year?

All tutors said they will or would like to return again next year:

"I thoroughly enjoyed tutoring and I am looking forward to meeting new pupils and sharing my enthusiasm for mathematics with them."

"I unfortunately can't participate in the project next year as I will be graduating this year but I have enjoyed my time tutoring and if I could do another year I would."

7.3. Teach First Sessions

The sessions were broken down into seminars which covered the following topics:

Behaviour for Learning Seminar:

Explored the various things that influence children and how this is manifested in their behaviours. Some theory and positive strategies were taught to understand and deal with these behaviours as and when they happen.

Communication Seminar:

Examined communication with focus on written and verbal channels. Participants were given the opportunity to practice their written and spoken skills, and think about the way they communicate. This helps assess the impact of the messages they are trying to convey.

Assessment in the Classroom Seminar:

Explored how to assess the learning of children in the classroom, and provided some practical tools to help measure the progress that students make. It provided a valuable insight into teaching as career.

Tutoring and Mentoring Seminar:

Explained the principles of one-to-one and small group tuition and provided a toolbox of techniques to tutor pupils of all ages. It enables tutors to understand their pupils' misconceptions and help with their planning.

Creativity and Innovation Seminar:

Discussed creativity and development of ideas. A range of activities involving unlearning, wondering, discussing and thinking outside the box were organised.

Presentation Skills Seminar:

Covered techniques for effective presenting, including the structure, visual aids and delivery.

7.4. Cost Breakdown

Costs incurred in the delivery of this project were in line with the initial application

		2012-13
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Recruitment, training and support for student tutors	Recruitment and publicity. Interview/selection processes. CRB administration/clearances. Training sessions for student tutoring (working in schools/effective mentoring etc.). Career and skills developments (teaching as a career)	
	Sub total	15
Payments for student tutors.		
	Sub total	12
Centre for Mathematics academic leadership, co-ordination and delivery	Leadership/liaison with Academy staff. Session/workshops on subject developments (at University and/or academy as required) External expertise/consultancy (Maths/ numeracy) Workshops/ lectures at University for Academy students	
	Sub total	20
Academy co-ordination and management	On site management and deployment of student tutors	

	Sub total	12
Gen. administration/running costs	Print/stationery/comms Governance/steering group support. Project/scheme evaluation.	
	Sub total	5
	TOTAL	64