

Hunter Kane

Powered by  HeartMath®

PEAK PERFORMANCE IN EDUCATION

Case Studies

Use of the Peak Performance techniques on a regular basis has been shown to improve:

1. Physical health – cardiovascular, hormonal and immune function
2. Personal well being, energy and vitality
3. Cognitive Function, perceptual clarity and creativity
4. Business performance

Background and Introduction

Since 1991 Hunter Kane has provided a range of innovative and successful global development initiatives for some of the world's most prestigious companies. These programmes continue to be well received as they consistently meet the needs both of organisations and of individuals. Our approach was created from a desire to equip people with a range of skills designed to help them become more effective, now and in the future.

Hunter Kane is the exclusive licensee in Europe for HeartMath LLC's training programmes and products, and has trained over 5000 people in Peak Performance over the last four years with corporate clients, including Shell, BP, Unilever, HSBC and Hewlett-Packard. These programmes have been delivered throughout Europe, Asia, the Middle East, Africa, Latin America and the USA.

The term HeartMath was created by founder and CEO Doc Childre to describe a system of practical tools to boost performance by enhancing heart-brain communication and coherence within individuals and organisations.

Hunter Kane, with HeartMath LLC, has provided highly successful programmes to achieve dramatic improvements in health, productivity, performance, and mental, emotional and physical balance. HeartMath programmes and materials are not intended to replace treatments for medical or psychological conditions by licensed physicians, psychologists or other health care professionals.

This Peak Performance programme has been developed as a collaboration between Hunter Kane and HeartMath.

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The Peak Performance programme is based on the book
From Chaos to Coherence: The Power to Change Performance
by Doc Childre and Bruce Cryer

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HeartMath in Europe

PLESSINGTON CATHOLIC TECHNOLOGY COLLEGE
6th Form Students – Psychometric Data
Dec 2003 – Feb 2004

"Working with Hunter Kane we have used HeartMath for a number of years with staff as well as pupils across all Key Stages. Staff report improved work/life balance and reductions in stress. For pupils we have seen a marked improvement in exam performance, concentration levels and behaviour."

Tony Lloyd
6th Form Manager, Plessington Technical College

Tired

	Pre	Post	
I feel tired	64%	47%	Often / Most of time
I feel exhausted	52%	26%	Often / Most of time
I feel fatigued	46%	16%	Often / Most of time
My sleep is inadequate	44%	37%	Often / Most of time
Sleeping is worse than normal	44%	21%	Agree / Strongly Agree
Body aches	36%	0%	Often / Most of time

Anxiety

	Pre	Post	
I feel worried	20%	11%	Often / Most of time
I feel anxious	24%	11%	Often / Most of time
I feel uneasy	21%	5%	Often / Most of time
I feel panicky all of a sudden	21%	5%	Often / Most of time
I have felt as if something awful was going to happen	16%	5%	Often / Most of time
I experience rapid heart beats	24%	0%	Often / Most of time

Mental Clarity & Decisiveness

	Pre	Post	
Mentally very sharp and quick thinking	28%	58%	Often / Most of time
My concentration is as good as ever	24%	58%	Agree / Strongly Agree

Work Pressure

	Pre	Post	
The workload is excessive	72%	37%	Agree / Strongly Agree
I am under too much pressure	64%	42%	Agree / Strongly Agree
There is never enough time	79%	53%	Agree / Strongly Agree
I have time to think	44%	68%	Agree / Strongly Agree
Appreciative	72%	63%	Often / Most of time
I feel conflict between school and personal priorities	72%	53%	Agree / Strongly Agree
School work spills over into my home life	80%	63%	Agree / Strongly Agree
I find it easy to cope with time pressure	28%	32%	Agree / Strongly Agree

Productivity

	Pre	Post	
Very disorganised	32%	16%	Often / Most of time
I am highly productive	24%	26%	Agree / Strongly Agree
I accomplish all work objectives	28%	47%	Agree / Strongly Agree
My work produces excellent results	20%	32%	Agree / Strongly Agree
I complete my tasks to my satisfaction	54%	53%	Agree / Strongly Agree
I am creative and innovative	48%	63%	Agree / Strongly Agree

Self Management

	Pre	Post	
I have lost interest in my appearance	25%	0%	Agree / Strongly Agree
I find it difficult to control my emotions	52%	42%	Agree / Strongly Agree
I get annoyed easily	40%	37%	Agree / Strongly Agree
I felt more unhappy than usual	40%	26%	Agree / Strongly Agree
I have felt less able to enjoy daily activities	36%	11%	Agree / Strongly Agree
I have been feeling reasonably happy	60%	74%	Agree / Strongly Agree

Self Esteem

	Pre	Post	
I find it easy to say "No"	40%	37%	Often / Most of time
I feel good about myself	28%	47%	Often / Most of time
I have felt less able to face my problems	28%	11%	Agree / Strongly Agree
I have felt less useful than usual	16%	5%	Agree / Strongly Agree
I have been less confident than usual	28%	16%	Agree / Strongly Agree
I have felt more worthless than normal	24%	11%	Agree / Strongly Agree
I have felt less able to overcome my difficulties	28%	16%	Agree / Strongly Agree

Stress Cases

GHQ-12 Questions

	Pre	Post
Non Stressed Cases (GHQ score <3)	56%	84%
Total Stress Cases (GHQ score >3)	44%	16%
Mild cases (GHQ score 3-5)	16%	5%
Moderate cases (GHQ score 6-8)	16%	5%
Severe Cases (GHQ score 9-12)	12%	5%

Clinical Anxiety & Depression (Hospital Anxiety Depression Scale – HAD)

	Pre	Post
Anxiety Cases	20%	5%
Depression	4%	0%

PLESSINGTON CATHOLIC HIGH SCHOOL

Staff Psychometric Data

23 May 2003 / 18 June 2004 Combined

Tired

	Pre	Post	
I feel tired	82%	31%	Often / Most of time
I feel exhausted	67%	21%	Often / Most of time
I feel fatigued	64%	23%	Often / Most of time
I feel slowed down	30%	31%	Often / Most of time
My sleep is inadequate	59%	31%	Often / Most of time
Sleeping is worse than normal	38%	18%	Agree / Strongly Agree
I experience aches & pains	46%	18%	Often / Most of time

Anxiety

	Pre	Post	
I feel worried	44%	18%	Often / Most of time
I feel anxious	54%	21%	Often / Most of time
I feel uneasy	39%	8%	Often / Most of time
I feel panicky all of a sudden	28%	13%	Often / Most of time
I have felt as if something awful was going to happen	32%	11%	Often / Most of time
I experience rapid heart beats	18%	46%	Often / Most of time

Anger

	Pre	Post	
I feel frustrated	46%	26%	Often / Most of time
I feel annoyed	39%	13%	Often / Most of time
I feel irritated	38%	13%	Often / Most of time
I feel angry	26%	8%	Often / Most of time

Relaxed

	Pre	Post	
I feel calm	49%	64%	Often / Most of time
I feel peaceful	31%	56%	Often / Most of time
I feel relaxed	23%	51%	Often / Most of time
I feel restless	54%	28%	Often / Most of time
I feel tense	59%	18%	Often / Most of time

Positive Attitude

	Pre	Post	
I can look forward to things	67%	74%	Agree / Strongly Agree
I can see the funny side of things	77%	87%	Often / Most of time
I can enjoy the TV or a good book	44%	63%	Often / Most of time

Mental Clarity & Decisiveness

	Pre	Post	
I am very perceptive	67%	87%	Often / Most of time
I am mentally very sharp	49%	59%	Often / Most of time
I feel it is very easy to prioritise	67%	21%	Often / Most of time
I am less decisive than usual	44%	18%	Agree / Strongly Agree
My concentration is as good as ever	36%	67%	Agree / Strongly Agree

Self Management

	Pre	Post	
I have lost interest in my appearance	15%	8%	Agree / Strongly Agree
I find it difficult to control my emotions	44%	33%	Agree / Strongly Agree
I get annoyed easily	31%	23%	Agree / Strongly Agree
I felt more unhappy than usual	41%	26%	Agree / Strongly Agree
I have felt less able to enjoy daily activities	49%	16%	Agree / Strongly Agree
I have been feeling reasonably happy	74%	82%	Agree / Strongly Agree

Self Esteem

	Pre	Post	
It is difficult to stand my ground	23%	8%	Often / Most of time
I find it easy to say "No" to senior management	15%	18%	Often / Most of time
I feel good about myself	53%	64%	Often / Most of time
I have felt less able to face my problems	18%	18%	Agree / Strongly Agree
I have felt less useful than usual	36%	23%	Agree / Strongly Agree
I have been less confident than usual	44%	21%	Agree / Strongly Agree
I have felt more worthless than normal	26%	13%	Agree / Strongly Agree
I have felt less able to overcome my difficulties	31%	15%	Agree/Strongly Agree

Stress Cases

GHQ-12 Questions

	Pre	Post
Non Stressed Cases (GHQ score <3)	41%	79%
Total Stress Cases (GHQ score >3)	59%	21%
Mild cases (GHQ score 3-5)	23%	10%
Moderate cases (GHQ score 6-8)	13%	0%
Severe Cases (GHQ score 9-12)	23%	10%

Clinical Anxiety & Depression (Hospital Anxiety Depression Scale – HAD)

	Pre	Post
Anxiety Cases	44%	15%
Depression	8%	3%



The True Mark Of Affection

Jerome Burne reports on a project that is harnessing the power of positive emotions to eliminate stress and raise exam results

A visitor to the computer room at Plessington Catholic high school technology college, the Wirral, might come across an unusual sight. Twelve students sit before their screens, eyes half-closed, hands on hearts. They are breathing evenly and regularly. The observer might notice a wire snaking from each machine to a plastic sensor attached to one of their fingers.

The students have been practising a powerful relaxation technique called heart rate variability (HRV) training that has been having a remarkable effect on the way pupils and teachers handle stress. What makes the experiment unusual is the use of computer software that links the activity of the heart with pupils' emotions. "I get really stressed out," says deputy head girl Lindsey Furlong. "I've always hated exams. A while ago I got so stressed I developed alopecia. I wanted to learn to drive, but the idea of driving lessons was too alarming."

All that has changed for Lindsey as she has learned how to control the rhythm of her heart. The sensor on her finger records her pulse while a computer program transforms the information into a pattern of lines on the screen. By concentrating on positive emotions of affection and appreciation, she can change the variability of her heart rate - the HRV.

The technology Lindsey and other sixth-formers and staff have been using was developed by a Californian institute called HeartMath. Rather than simply measuring pulse rate, it tracks the changes in time between each heartbeat. It is based on a belief that the heart is controlled by two arms of the central nervous system - the sympathetic and the parasympathetic. The former controls arousal responses - increasing heart and breathing rates and narrowing blood vessels, while the latter reverses these changes. A healthy person constantly switches between the two - giving a high HRV - because we need both. Getting stuck in relaxation or arousal - having a low HRV - is dangerous.

The program is a bio-feedback tool that teaches users to take control of their HRV and counter stress by focusing on positive emotions. As Lindsey concentrates, the pattern on the screen in front of her becomes increasingly rhythmic and coherent.

"It took about 20 minutes a day for a month before I started noticing the changes," she says. "Then the effect was amazing. The other day I did my art A-level, which is pretty stressful. You have to stand most of the time and I was dreading it, but I used the HRV technique at the beginning and I enjoyed it. I felt very relaxed. It was the best exam I've ever done." Now she's learning to drive.

In recent years more than 6,000 UK executives have been taught the Technique to help them handle stress. Last year, a study reported in the *Journal of Complementary and Alternative Medicine* found that executives on such a training course reported a 36 per cent reduction in stress symptoms and that the blood pressure of those with hypertension - almost one in three - returned to normal.

The Plessington experiment is the first time the software has been used in a British school. Recent reports about high levels of teacher and pupil stress suggest it's a timely initiative.

"When I read about the technique, it seemed too good to be true" says Tony Lloyd, a psychotherapist and Plessington's student support services manager. "But we have had such significant results with HRV training that next September we want to make it available for all the kids in school with challenging behaviour during their learning support session." There are also plans to run training sessions for local schools that are interested.

The introduction of the system last May was made easy by the fact that both Mr Lloyd and headteacher Adrienne Burns discovered it independently. Mr Lloyd heard good reports from a US psychiatrist who had used it to control an irregular heart rhythm, while Miss Burns was told about it by deputy head Alan Lee, whose wife, had been studying it as part of her work as a researcher at nearby Liverpool University. The clincher was when it emerged that Unilever, which has strong connections with the school, had given HRV training to its executives. Hunter Kane, the firm involved in that training, agreed to give an introductory session to the school.

"I was sceptical," admits assistant headteacher Martin Kane. "It all sounded too Californian, but now I find it a great way to unwind at the end of the day - much more effective than a stiff whisky. It's also good when you are stuck in traffic and start to steam up. Life can be tense at school and this is a useful tool to help you handle it."

For years researchers have been coming up with evidence that positive emotions make people healthier and function better, but no one really understood why. The HeartMath link goes some way to explaining the phenomenon, and provides scientific support for the poet's insight about the link between the heart and love.

The value comes with being able to use the techniques in daily life. "Once you can shift your HRV to an optimum rate, you can apply the techniques as soon as you spot a situation is getting stressful," says Tony Lloyd. "Usually at this point, hormones released in the body speed up your heart rate, and your stress responses kick in. You start thinking less clearly and you feel angry or anxious.

"The idea is to fuse your reasoning and your emotional sides so they work together," explains Mr Lloyd. "You can put yourself into a sort of neutral gear where, instead of being taken over by your usual stress response, you can ask yourself what is best way to respond. Suddenly you realise you have choices."

The same is true of how Plessington plans to use HRV. Besides expanding training to pupils with behavioural problems, the school intends to use it as a teaching tool in biology. "It certainly made me want to know more about the links between my brain and my heart," says Lindsey. But right now what everyone is waiting for is to see if it has given them an edge in the exam results.

For more details on training and HeartMath: www.hunterkane.com

Hunter Kane is one of the UK's leading companies behind performance-improvement and stress-management programmes, and has trained more than 6,000 people in "Peak Performance" in the last

six years. Its corporate clients include Shell, BP, Unilever and Hewlett-Packard and its programmes have been delivered throughout Europe, Asia, the Middle East, Africa, Latin America and the USA.

Hunter Kane's "Peak Performance" programme, incorporating HeartMath™ technology, has been scientifically proven to help individuals achieve dramatic sustainable improvements in performance, health, productivity and mental, emotional and physical well-being. The "Peak Performance" programme teaches people how to activate positive emotion through the intuitive power of the heart. "By adjusting the heart's rhythm we alter the electrical impulses sent to the brain, changing our physiology, literally, in a heartbeat," explains Chris Sawicki, Managing Director of Hunter Kane.

In addition to delivering significant benefits to corporate clients, Hunter Kane has also run successful programmes for sports bodies, schools and the police. Hunter Kane is the exclusive licensee of HeartMath™ in the UK and Europe.

PLESSINGTON CATHOLIC HIGH SCHOOL ADHD / ADD STUDY

Effects of HeartMath in children with ADHD

Background

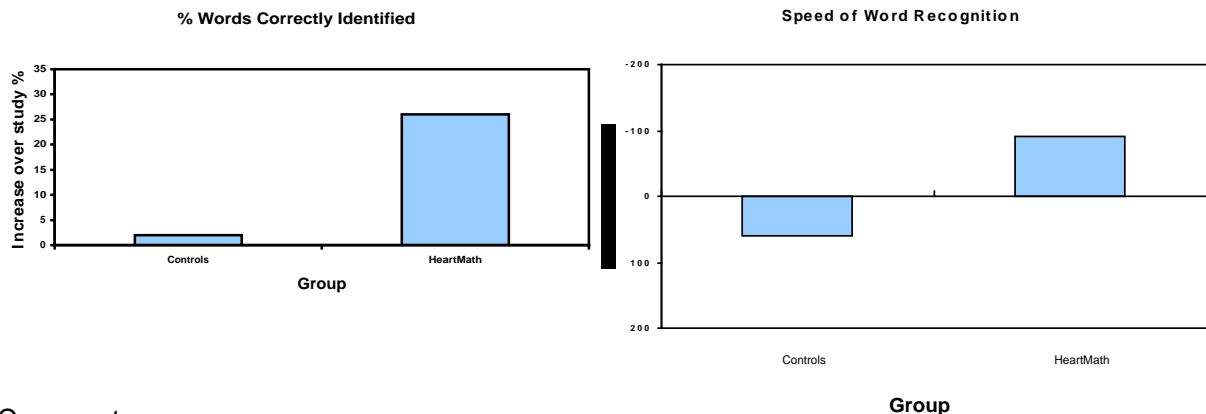
As part of an ongoing study in children diagnosed with ADHD, eight children were taught HeartMath techniques, versus eight control children.

The computerised cognitive assessment system of CDR Ltd (www.cdr.org.uk) was administered to the children prior to the study for training purposes, then before and six or more weeks after HeartMath training or the control procedure.

The CDR system assesses:

- Attention
- Working Memory
- Long Term Memory

The charts below show the improvement in the ability to correctly identify words showed previously – a measure of long-term memory and the improvement in time taken to correctly identify words.



Comments

- The improvement in the ability to correctly recognise the words was statistically significant ($p < 0.02$).
- The improvement was large in magnitude, representing an increase of 50.8%, compared to the increase of 3.1% in the control population.
- Importantly, the students also became faster at correctly identifying the words, which while not statistically significant, shows that accuracy was not improved at the expense of speed.
- This early analysis of the data is encouraging, showing improved memory capability of the students.
- Previous work has also shown HeartMath to improve long-term memory in healthy volunteers¹, and the present preliminary finding is therefore consistent with previous work.

¹ Bradford EJ, Wesnes KA, Brett D. Effects of peak performance training on cognitive function. Journal of Psychopharmacology 19: A44.

PLESSINGTON CATHOLIC HIGH SCHOOL

ADHD / ADD STUDY

Responses to HeartMath from pupils, teachers and parents

Background

At the beginning of the Winter 2005 academic term, Hunter Kane, in collaboration with CDR Ltd (www.cdr.org.uk) and Plessington Technical College started a carefully controlled scientific study into the effects of HeartMath training on a group of Year 6 and 7 students, all of whom were statemented with various degrees of AD(H)D. Of the 100 students identified, half received HeartMath training, completing games and exercises using the Freeze-Framer Interactive Learning System and the remainder completed exercises using age appropriate Lego. Out the outset of the trials, our partner organisation, CDR Ltd, world-class leaders in the measurement of cognitive function, undertook an initial assessment of the students, from both groups. Six weeks later, and following appropriate training, further computer-based tests were taken by the students.

Initial and interim results from CDR have shown:

- The improvement in the ability to correctly recognise the words was statistically significant ($p < 0.02$).
- The improvement was large in magnitude, representing an increase of 50.8%, compared to the increase of 3.1% in the control population.
- Importantly, the students also became faster at correctly identifying the words, which while not statistically significant, shows that accuracy was not improved at the expense of speed.

These results are very significant for the project as a whole, which is due to conclude in Summer 2006. The Learning Support Research Assistant at Plessington has solicited, verbatim, the following quotes from students, parents and teachers of those who have received HeartMath training.

Andrew, age 11

"When I do HeartMath it makes me happy. It's really good to cheer me up – if I feel sad I just do it and then I get happy. If I felt like crying before, then I wouldn't afterwards.

A boy from my year punched me when I was waiting outside Geography. This girl told the teacher and then she sent me to her office. I was sitting there waiting and wanted to cry. I did HeartMath and I was happy again."

Mother

"I have seen a great change in Andrew's behaviour at home. Getting to sleep has always been a problem. He never used to go to bed himself; he would stay up until he dropped. Now he uses the CD to get himself to sleep. Andrew has always had a short fuse; he doesn't take no very easily. Now he seems to be on a more even keel, it has made our home life much easier."

English Teacher

Andrew appears to be getting on with others in the classroom more. He has always struggled with peer relationships and remains quite odd, but he makes more of an effort now and the others are more willing to sit with him as a result. He wanders round the classroom less, and seems better within himself. Andrew is a difficult child, I expect he always will be, but HeartMath seems to have changed him without him really knowing."

Holly, age 11

"When I had my maths test I did it when we were waiting outside and it got rid of the butterflies. It made it easier to concentrate. When you are in trouble and people tell you off, if you keep quiet instead of shouting out it calms you down.

Before you go to sleep it helps you relax, say if something has happened like my mum and my sister have fallen out or my dad has taken my playstation, and I don't want to think about it, then the breathing and thinking helps me get to sleep."

Mother

"Holly has really enjoyed doing HeartMath; she talks about it all the time. She's a lot calmer and can concentrate more on what she's doing. Before she was all over the place, you know, disorganised. Now when she sits down to do her homework, she's more focused."

Science Teacher

Holly has settled down now, she is less fidgety. She has benefited from it, I'm sure of that. You can see it round school too – she's not as hyper on the playground"

Josh, age 12

"My cousin Grant winds me up, we've been falling out 'cos he's been saying things about me. I used HeartMath that night and I felt happy; it takes all the bad things out of you. My Nan likes it too, we listen to the CD sometimes 'cos she thinks it calms me down."

Mother

"Josh is happier when he sets off for school. He used to always play up to stay off; you should have heard the excuses. But now he seems more comfortable with the idea of going, and doesn't make half the fuss"

Maths teacher

"Josh is less likely to shout out silly comments in class, something which he always used to do. He doesn't wander around aimlessly and if I set him a specific task he will now settle down to complete it. If HeartMath has done this then it really is an excellent thing."

Jess, age 12

"HeartMath is good it makes me happy."

Mother

"Jessica's aggression towards her brother has calmed down a lot and she tends to remove herself from confrontation, rather than attacking him. Her sleep pattern has changed, she seems to fall asleep earlier."

English Teacher

"Jess is doing much better in lessons since doing HeartMath, her attention and concentration both seem better. She is less likely to chatter through the whole lesson, and is more responsive when asked questions."

Danny, aged 13

"I like it a lot. I don't get into fights as much anymore."

Spanish Teacher

"Danny is less excitable. He used to squeal out in class and make funny screeching noises, but there's less of that now. I think as far as Danny is concerned he may not notice any differences, as they are quite subtle. He's more settled and seems more at ease in the classroom."

Mother

"Dan has been getting me to practice the breathing at home when I get upset, which I have been a lot recently. He sits down and gets me to count in for five and out for five, and tells me to think happy thoughts.

I think as far as he is concerned it has helped him no end. In the past he has shown some aggression in school, earlier this year he was always getting into trouble, and when he bit another schoolmate he got suspended. The other day though he came home and said he had walked away from a fight, and he seems less volatile when he is stressed."

Tom, aged 13

"HeartMath is great."

Mother

"Tom is showing signs of more balanced emotions and does not get as aggressive when he is frustrated. He is more pleasant to his brother and sister as he is less angry at home. He used to fly off the handle and lash out quite regularly, but I have not seen this side to him for a while."

Support Assistant

"Tom worked very well in his English lesson today. He settled down to work remarkably quickly and hardly wanted any help from me. He completed all his work quickly and then held his hand up to ask for more. This is unusual for Tom as he usually needs my help and prompting to keep him on task. I was really proud of him today."

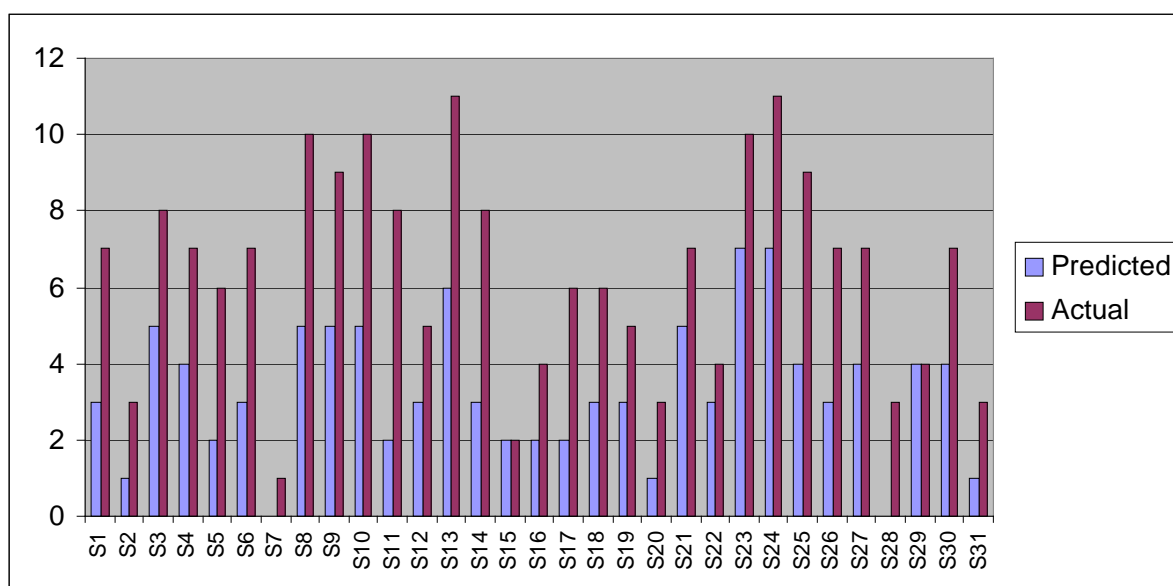
MONTGOMERY HIGH SCHOOL, BLACKPOOL

Year 11 Students – GCSE Exam Results

The HeartMath Freeze-Framer software was originally introduced to the school in 2004 as extra support for Year 11 students who were 'gearing up' for their final GCSE exams.

Of course, it is impossible to calculate the exact effect HeartMath® had on the exam results of the students, however, their final grades speak for themselves:

Actual Outcomes 2005 – 31 Students



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