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PROGRESS REPORT ON THE ENGLISSH GRADUATE ENTERPRISE PROGRAMME 1985/86

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Progress Report on the English Graduate Enterprise Programme 1985/1986

INTRODUCTION

The GEP in England is a primarily government sponsored (MSC) training initiative, with initial private sector support from BP, Nat West, Arthur Andersen and B.I.M., to assist first time graduates, with business ideas, to start their own businesses. Launched first in Scotland in 1983, it was developed and launched in England from 1984. At the present time, with national unemployment starting to decline, this training initiative has come into question both from within Government (questioning the cost inputs of the programme but concerned only with the employment outcome measure) and from without (from academicians e.g. David Story[1], claiming "that it has never been shown that the net effect of subsidising small firms is to create more wealth in the community"). This paper is not intended to rebut either major criticism but will attempt to:

(1) Describe the programme concept and design, with flaws and successes;

(2) Outline the business outcomes of GEP 1 at Cranfield (1985 programme), with relevance for outcome measurement;

(3) Review the programme impact on student entrepreneurship, with respect to academic concern;

(4) Draw conclusions for the design and measurement of future training initiatives of this type.

1. PROGRAMME CONCEPT AND DESIGN

The average age of graduates on the first three English programmes was 24, with a median age of 23. Most studies of entrepreneurship and new business creation consider the early thirties to be the more successful age group for launching new ventures[2]. Therefore, programme design in both recruitment and delivery, had to reflect both the starting objectives of the government sponsors of the programme as well as the particular training requirements of the students.

The programme owed its origin to government concern[3] that UK college graduates were less interested in self employment and small business than, for example, careers in accounting (Exhibit 1) and were less enterprising than equivalent graduates for example in the USA (Exhibit 2). There was also concern with graduate unemployment, running at over 10% in the depressed employment climate of the early 1980's, with large firms reducing their graduate intake (Exhibit 3). These concerns were not set as specific objectives for the programme. Stated objectives as such were initially high minded but somewhat vague (Exhibit 4). After 3 years of experience, however, these now could and should be made detailed and specific.

Recruitment

UK pre-university and university training is deliberately specialist. However with less than 10% of UK graduates specialised in business studies (compared with over one-third in the USA), the typical student recruited to the programme needed a broadly based business development training that would be both stimulating and at the same time replicate the sometimes painful early learning experiences of starting a new business (e.g.

Exhibit 5). To meet the admittedly broad programme objectives, therefore, the programme commenced with awareness seminars at major English universities and polytechnics. It also provided support to students in completing a mini-business plan application form from a network of some 42 locally based academic counsellors. The process culminated in a two day selection and training weekend for all those who completed the application forms. The process of taking students from raw idea into business is summarised in Exhibit 6. It was characterised largely by self-selection as the students, guided by the application form and with positive support from the counsellor, undertook simple first steps in market research to validate their ideas. As the number of training places increased, nearly 3 out of 4 students who completed the application forms, were finally rewarded with places on GEP or other training initiatives (Exhibit 7). Analysis of student ideas and educational background, as well as achievement in recruiting numbers of graduates specified, has been documented[4].

Training Programme

The actual training and support programme is summarised in Exhibit 8. It comprised some five individual weeks training at management schools, interspaced with eleven non-residential weeks of market research activities funded by a grant, culminating in a Sales Exhibition for buyers. The programme was organised around the de elop ent and presentation of a business plan for each new business. This was intended t^ oth validate the original business idea and to provide a mechanism for attracting start-up funds for each venture. Teaching methods included use of workbooks[5] with students receiving specific instruction in skill areas, then undertaking research and applying the analysis to their own businesses. The programme used case instruction primarily for the purpose of providing role models of former students. It also used clinics with outside panels of experts (lawyers, estate and patent agents etc.).

Students were motivated by the personal, practical focus of the training (e.g. developing own sales brochures and press releases, some of which were examined as case examples and considerably improved upon by local sponsor, First City Advertising). The practical nature of the private company support to the programme, in the form of product development aid by BP, bankers panel advice by National Westminster Bank and accounting assistance from Arthur Andersen for the year following the completion of training, was both imaginative and supportive for the students. Finally, it was found necessary to increase the training time allocated to practice selling training (e.g. each student was involved and videod in a selling exercise, increased sales exhibition training etc.) following feedback from earlier course participants in the field (Exhibit 9). While finance training was modified to increase time on breakeven and cash-flow analysis, with less on contribution accounting and return on investment analysis.

2. BUSINESS OUTCOMES, GEP 1, 1985

Although initial objectives for the English GEP were general rather than specific, quantifying the business outcome for each student was recognised at the outset as being a necessary task for three major reasons:

a) to permit training programmes to be revised in the light of actual student business experience;

b) to encourage students to maintain contact and to provide a self-learning device on their own achievements;

c) to ensure that Government as the main sponsor, and the private sponsors, received "value for money"[6].

To this end a voluntary quarterly audit report was designed (subsequently semi-annual, see Appendix 1) and a data base established at Cranfield. GEP 1 students have now been trading for more than 18 months (therefore outside the further 12 months Government's assistance often provided by the Enterprise Allowance Scheme). As shown in Exhibit 10, nearly three quarters of the 36 starters are still fully employed in their own enterprise, with only 17% having entirely abandoned their original venture in favour of full-time employment, 8% continuing with part-time employment. This compares to the 41% first eighteen months failure rate quoted by Ganguly[7] and is about the same as other start-up courses[8], although the age of participants is considerably younger. In addition, several in employment claim to be considering new entrepreneurial activity (e.g. "when funds improve"); none are unemployed. Of the 26 businesses currently still trading, 85% reported that they were trading above break-even point (one, below break-even, has a 2 year lead-time in bringing his kit-cars to market), and 70% reported that they were "confident" or "very confident" about the future.

Exhibit 11 gives an indication of the financial performance of those still pursuing their own business activity. As might be expected, turnover is increasing faster than net profitability. If we group the GEP 1 businesses and regard it as a single holding company (with business lines ranging from Dockspeed freight transport, through the manufacture of folding bicycles to the sale and distribution of plastic greeting cards) we could report that in the 12 months June 86 - June 87, GEP 1 Company sales turnover was £1,448,688, and net profit was £135,918, giving a margin of 9½% on sales (excluding a £42,000 property asset windfall, and after deducting losses of those businesses below break-even). The total investment cost for the MSC in this programme was approximately £250,000 (see Exhibit 12). A businessmen, therefore, might view the GEP 1 Company as an investment producing a two-year payback, a simple return on

investment of more than 50% per annum! This would ignore however, the further, usually small, amounts of private sector investment and the fact that "net profit" is mostly calculated prior to owner's drawings. The figures, therefore, simply provide a first indication of the underlying health of the businesses.[9]

Viewed in employment outcome terms, however, a legitimate concern of the primary Government sponsor, results have not been as encouraging. Current full-time employment, including student entrepreneurs, stands at 41 for the latest 24 businesses reporting; together with a reported 32 part-time workers (including 14 full-time for 10 weeks at Oxford Activity Camps) and some 76 indirect workers (including 15-20 agents for plastic cards, clearly carrying other people's merchandise lines as well). These low employment levels, however, should be seen in perspective, given the relative youth of the student entrepreneurs. Business school training and counselling has consistently emphasised the need for caution in early start-up stages (referred to as the Spider approach to entrepreneurship - see Exhibit 13). The use of part-time employees has constantly been encouraged during the early phase of development, while the entrepreneurs learn to manage and to react to markets. Similarly, caution has been advised in not entering into any long-term property commitments and sub-contracting recommended rather than direct manufacturing. Clearly, for youthful entrepreneurs, profits have to be earned and track records established before any significant finance can be attracted into the business. A few case examples might make these points more clearly:

a) Dockspeed has been the largest employer in GEP, with 5 full-time employees; each employee, however, has been clearly based on a newly leased vehicle, following leasing company satisfaction with the profit progress of the company;

b) Howard's Originals, a novelty greeting card company, despite being the most consistently profitable company (over £10,000 p.a. net profit in each of first two years) has only now obtained a significant loan. This will enable the company to move from home to rented premises and to engage for the first time a warehouse employee;

c) Anthony Robinson's holograms contract with Rigby Electronics and Mark Sander's folding Strida bicycles, (Exhibit 14) have provided no recorded full-time employment other than for the entrepreneurs themselves, as all their work is sub-contracted to licenced manufacturers. Clearly, however, there is an unquantifiable sub-contract employment benefit.

One may conclude, therefore, that some twenty-six new businesses have been satisfactorily started, with a positive, if modest, return to the entrepreneur owners and a capacity, as yet undetermined, to make a real contribution to new employment, particularly over the period of some 2-5 years after start-up. A data base for GEP 1, 2 and 3 training programmes and a mechanism (semi-annual reports) to monitor progress exists at Cranfield. In judging the performance of GEP business outcomes therefore, wealth creation should come first, as this is the only sustainable way of creating genuine new employment, and a suitable time span allowed to measure the subsequent employment achievement.

3. IMPACT ON ENTREPRENEURSHIP

The question is frequently asked 'Would these student entrepreneurs have undertaken their enterprises anyway, without the costly support framework of the Graduate Enterprise Programme?' During the selection workshops for GEP 3 in March/April 1987, some 214 applicants for the GEP programme completed a market research

questionnaire on their intentions regarding starting their own business.[10] Only one out of ten indicated that their interest in starting their own business derived from the GEP programme itself; but out of the remaining nine, one half indicated it had not been their intention to start up immediately after graduation. The GEP programme, therefore, has provided an incentive for young people to accelerate and bring forward the timing of their projected business start-up. This, after all, is what might be perceived as a legitimate purpose of any educational experience: to provide concentrated skills training and "real world" experience, short circuiting the necessity for young people to gain experience by actually being employees and perhaps in the process losing their original entrepreneurial ambition. To further confirm this assertion, just over one third of the applicants (36%) indicated that they had actually already received offers of full-time employment. Following selection, few students failed to attend the GEP training (see Exhibit 7, a 90% acceptance rate following selection). We might conclude therefore that just over half of the participants on the programme owe their start, or more importantly the timing of the start of their own business, to the encouragement of the GEP programme.

A further question that could be asked is 'Has failure to be selected for the GEP reduced the number of potential business start-ups?' Some 92% of the 214 applicants interviewed for GEP 3 indicated that they intended to set up their own business regardless of whether or not they obtained places on the GEP (a not unnatural response during selection). A further survey of unsuccessful applicants for GEP 1 and 2 programmes produced a small response (19 only, due to address location difficulties). This small survey confirmed that over 95% had intended to set up in business, regardless of GEP places but in the event, following a negative decision, only 6 (32%) did actually set up their business after graduation. To the extent, therefore, that two thirds did not proceed with their earlier entrepreneurial intentions, the GEP has to accept either that

they have reduced or at least delayed some potential business start-ups; however, in response to a further question, nearly two thirds of respondents accepted that they thought the GEP selection decision was correct!

Furthermore of the six who set up in business, and who clearly did not think that the GEP selection decision was correct, five indicated that their business was currently trading profitably; none of their success is due to GEP! But at least they were not deterred from starting up by the GEP. While nearly all found some benefit in the two day selection weekend teaching workshops, one might conclude that really determined and potentially successful entrepreneurs are not dissuaded by selection decisions!

Finally, this research amongst GEP applicants did provide some information on family backgrounds, motivation and what the student entrepreneurs were seeking from GEP.

More than one third of the students indicated entrepreneurial antecedents in that 38% had fathers who owned their own businesses, 12% had mothers owning their own business; 28% of the total had grandparents who had owned their own businesses! The majority (61%) were starting their own business primarily to be independent rather than to make money (22%); more than half (51%) ranked training as the most important element of GEP, ahead of counselling (29%) and money (18%). This latter interest in business training was perhaps not surprising given that nearly two thirds (68%) were just completing their undergraduate degree, with nearly half (45%) having had less than 12 months work experience.

4. CONCLUSIONS

This report was written to provide some evidence from a specific MSC programme to fuel the debate on public and private support for small enterprise training. In a climate of almost total private company aversion to financing or assisting "high risk" start-ups, one might maintain that as long as the financial and employment returns for such investments are positive (and closely monitored) then Government is right to create "infrastructure" upon which the private sector can subsequently build by providing further venture capital and private investment (which is clearly what venture capitalists prefer to do, well after "start-up"). In this respect the training (not financing) of graduate entrepreneurs is no different to the clearance and refurbishment of inner city areas, in that it is a necessary pre-requisite to further development by encouraging subsequent future private investment.

Nonetheless changes in design and administration would improve the programme:

1) Set clear objectives for the trainer and the trainee:

As data on the effectiveness of such programmes is assembled, a redefining and a re-setting of specific business outcomes should be undertaken. Objectives such as "encouragement of entrepreneurship" cannot be assessed and more measurable financial as well as employment objectives should be set;

2) Set objectives and evaluate in Input/Output terms each Programme:

Management within Government departments by cost input comparisons amongst programmes should be modified to include financial output measures (turnover, net profit and number above/below breakeven) and pay back (financial and

employment) time horizons and targets compatible with the age and experience of programme participants.

3) Monitor these objectives regularly:

Monitoring of such programmes should become mandatory rather than voluntary upon participants and institutions. This does not mean a host of inspectors, auditors or forms, but a simple requirement for participants accepting places on such programmes to file management reports to the usually supportive provider data base so that future education, guidance and an informal review might take place. This suggests also that Government requires the management and provision of data be mandatory upon the providers of training, with access for independent verification.

Some of these suggestions are currently being considered for the Mark 2 GEP and we hope they will be introduced to this significant and positive graduate programme.

EXHIB

SURVEYS SHOW FEW UNITED KINGDOM GRADUATES ENTER SMALL BUSINESS OR SELF-EMPLOYMENT

1982

- ONLY 6% OF KEY MANAGERS IN SMALLER FIRMS WERE GRADUATES OR EQUIVALENT
- 14% IF CHIEF EXECUTIVES ARE INCLUDED

Source: The Stirling Surv

1983

- ONLY 500 OUT OF 150,000+ GRADUATING STUDENTS OPTEI FOR SELF EMPLOYMENT
- NEARLY 14,000 UNDERTOOK ACCOUNTANCY TRAINING

Source: Careers Service Destination Surve

EXHIBIT 2

IN USA, SIGNIFICANT NUMBERS OF GRADUATES START THEIR OWN BUSINESS....

- UNDER 30's STARTED 1 IN 3 NEW VENTURES
- A SIGNIFICANT GROUP WERE IN THEIR EARLY 20's WITH COLLEGE DEGREES
- THE CHANCES OF FAILURE THE SAME AT 24 AS AT 35!
- THE BIGGEST PROBLEM FOR YOUNG GRADUATES - 'BEING TAKEN SERIOUSLY'

Source: National Federation of Independent Business (USA) - 560 members

WHICH THE BRITISH G.E.P. HAS ATTEMPTED TO START TO REMEDY

- LAUNCHED IN STIRLING, SCOTLAND 1983
- FIRST ENGLISH GEP LAUNCHED AT CRANFIELD IN 1984/5, SIMILAR PROGRAMME IN WALES AND N. IRELAND
- SECOND ENGLISH GEP, BASED AT CRANFIELD, DURHAM AND WARWICK 1985/6
- THIRD ENGLISH GEP, BASED AT CRANFIELD, DURHAM, WARWICK, MANCHESTER AND BRISTOL 1986/7

EXHIBIT 3

WHAT'S GOING ON IN THE UNITED KINGDOM

"LARGE COMPANIES ARE NOW REDUCING THEIR LABOUR FORCES MORE THAN EVER BEFORE. THEY HAVE NO ALTERNATIVE, INDEED IT IS IN THE COUNTRY'S BEST INTERESTS THAT THEY SHOULD.

THAT MEANS THAT SMALL BUSINESSES CAN BE THE ONLY SOURCE OF REDUCTION IN UNEMPLOYMENT".

John Bolton, author of "Bolton Report"

Source: Financial Times, 14th October 1986

EXHIBIT 4

GRADUATE ENTERPRISE PROGRAMME BROAD OBJECTIVES

- TO STIMULATE ENTREPRENEURSHIP AND INTEREST IN SMALL BUSINESS AMONGST STUDENTS
  - IDEA GENERATION - SELF EMPLOYMENT -

- TO CHANGE ATTITUDES
  - RISK TAKING AND FAILURE

HOW

- CHALLENGE STUDENTS WITH BUSINESS IDEAS
  - REAL BUSINESS OUT OF HOBBIES
- PROVIDE TRAINING FOR BUSINESS START UPS
  - FINANCE AND MARKETING
- PROVIDE A COUNSELLING SUPPORT NETWORK FOR NEW BUSINESSES
  - PLANNING AND REVIEW

Source: GEP, Cranfield

EXHIBIT 5

YOUNG PEOPLE ARE GOOD AT MAKING MISTAKES .....

AND STARTING NEW BUSINESSES

"I HAVE NO REGRETS ABOUT DIVING IN THE DEEP END. WHEN YOU'RE YOUNG YOU CAN MAKE A FOOL OF YOURSELF. IT'S VITAL TO DO EVERYTHING POSSIBLE IN THOSE 10 YEARS AFTER SCHOOL ..... BUT IT TAKES TIME AND YOU'VE GOT TO BE PREPARED TO MAKE MISTAKES".

ROBIN BIRLEY, aged 27 The Guardian 1st March, 1985

- 1st sandwich bar, Fenchurch St., 1979 age 21
- 1986 profits £75,000 p.a., 3 sandwich bars

EXHIBIT 7

ENGLISH GRADUATE ENTERPRISE PROGRAMME IS GROWING

	GEP I 1985	GEPII 1986	GEPIII 1987	GEPIV 1988
NO. OF SEMINAR LOCATIONS	31	44	65	200
NO. STUDENTS ATTENDING 1ST SEMINAR	1003	1499	2020	4000
NO. STUDENTS SELECTED	40	70	125	350
NO STUDENTS ATTENDING PROGRAMME	36	67	110	300
NO. TRAINING CENTRES (ENGLAND)	1	3	5	9*

* (including Scotland and Wales)

Source: Report on Recruitment and Selection, Cranfield Working Paper

THE ENGLISH GRADUATE ENTERPRISE PROGRAMME

. TRAINING

- Management School Training	& Private Company Support Programme
1987	1988
July - Dec (16 weeks) . 5 weeks residential business school training . 11 weeks non-residential market research with academic counselling	Jan - Dec 12 Months Arthur Andersen Counselling and Aftercare. B.I.M.

British Petroleum product development support

National Westminster Bank's advice on obtaining finance

. FINANCIAL SUPPORT

1987	1988
MSC Training Allowance £40-62 per week for 16 weeks (5 weeks at Management School) Market Research Budge Up to £1200	Student may be eligible for MSC Enterprise Allowance £40 per week for 52 weeks

Source: CER Cranfield

STUDENTS LIST SALES & MARKETING AS NUMBER ONE PROBLEM

AREA	NUMBER OF COMMENTS	EXAMPLES
Marketing and sales related	7	Need good sales catalogue Need more selling time! Finding sales outlets!
Finance, or lack of	5	Need working capital Need to update Business Plan to obtain more working capital Costs not anticipated in first Business Plan
People	3	Loyalty of agents poor! Under-staffed!
Production	2	Bottlenecks - need more outworkers
Personal - loneliness!	3	No one to complain to!
Other	3	Sunday trading laws! Company law.

Source: Cranfield GEP 1 Semi-Annual Survey

EXHIBIT 10

GEP 1: 18 MONTHS ON

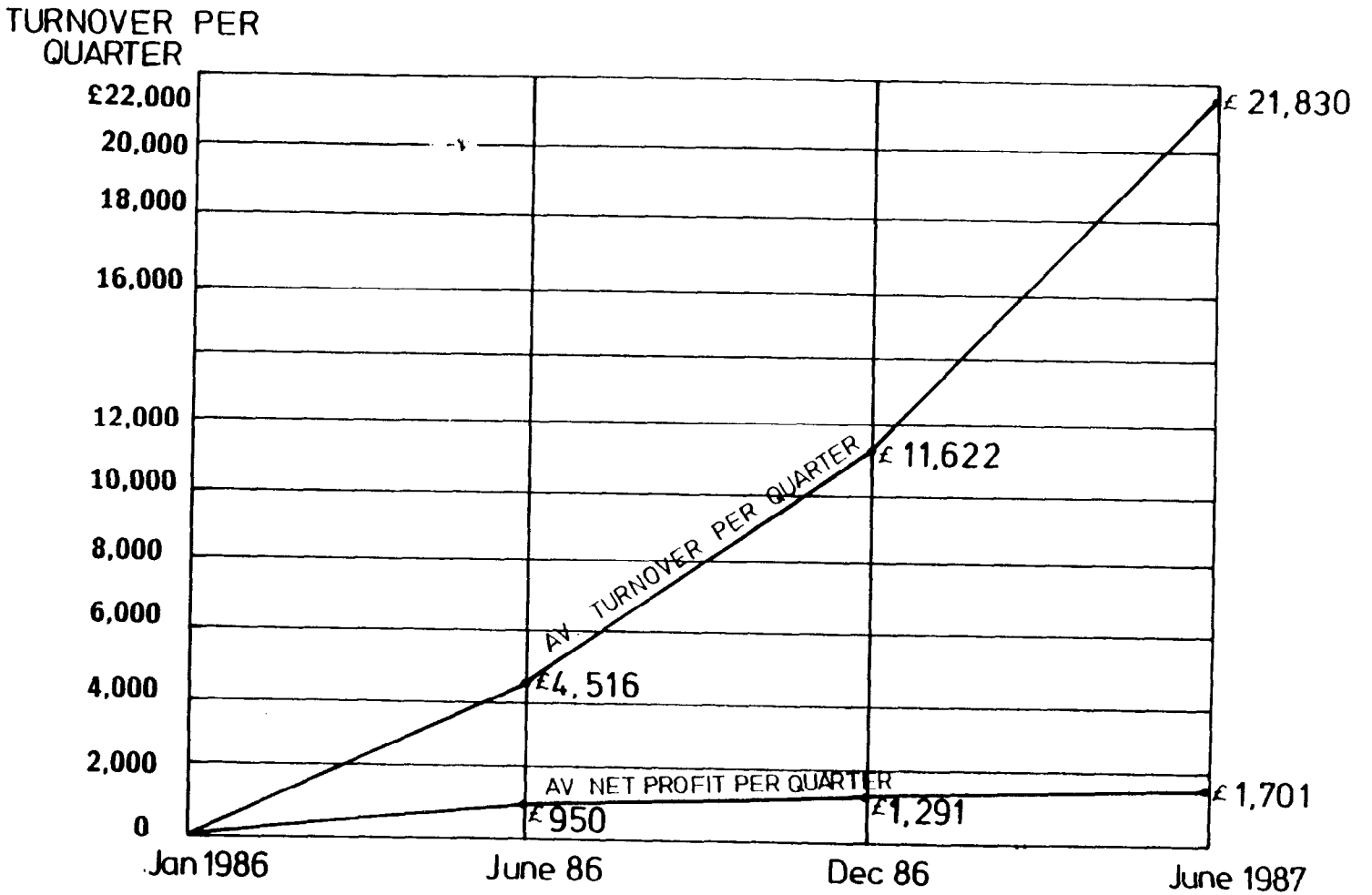
CATEGORY	NUMBERS	%
Full-Time, Self-Employed, Trading	26	72
Part-Time Trading (with Full-Time Job)	4	11
Full-Time Job	6	17
Course Totals	36 Participants	100%

Those with full-time jobs include:

one training to be an accountant, one in financial services, property development, market research and one in an enterprise agency

Source: Cranfield GEP Database

GEP 1 COMPANY TURNOVER INCREASING FASTER THAN NET PROFITS



	June 86	Dec 86	June 1987
NET PROFIT AS % TURNOVER	21%	11%	8%
NO. OF COMPANIES REPORTING	27 (75%)	28 (78%)	24 (67%)

Source: CRANFIELD GEP DATABASE

EXHIBIT 12

GRADUATE ENTERPRISE PROGRAMME

BUDGETED COSTS

CRANFIELD 1985

1.	Recruitment (seminars, publicity, counselling)	£40,000
2.	Accommodation	£41,000
3.	Teaching, Counselling & Administration	£100,000
4.	Market Research Grants (1250 per student)	£45,000
5.	Student Allowance (16 weeks)	£23,040
		£249,040

Source: Cranfield GEP Budgets
MSC Allowances

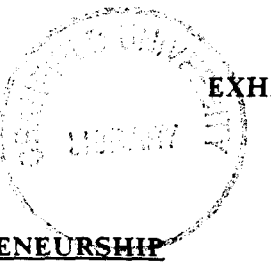


EXHIBIT 13

THE SPIDER'S APPROACH TO ENTREPRENEURSHIP

- When a spider falls, it doesn't get hurt
- It lands and moves on to weave another web!

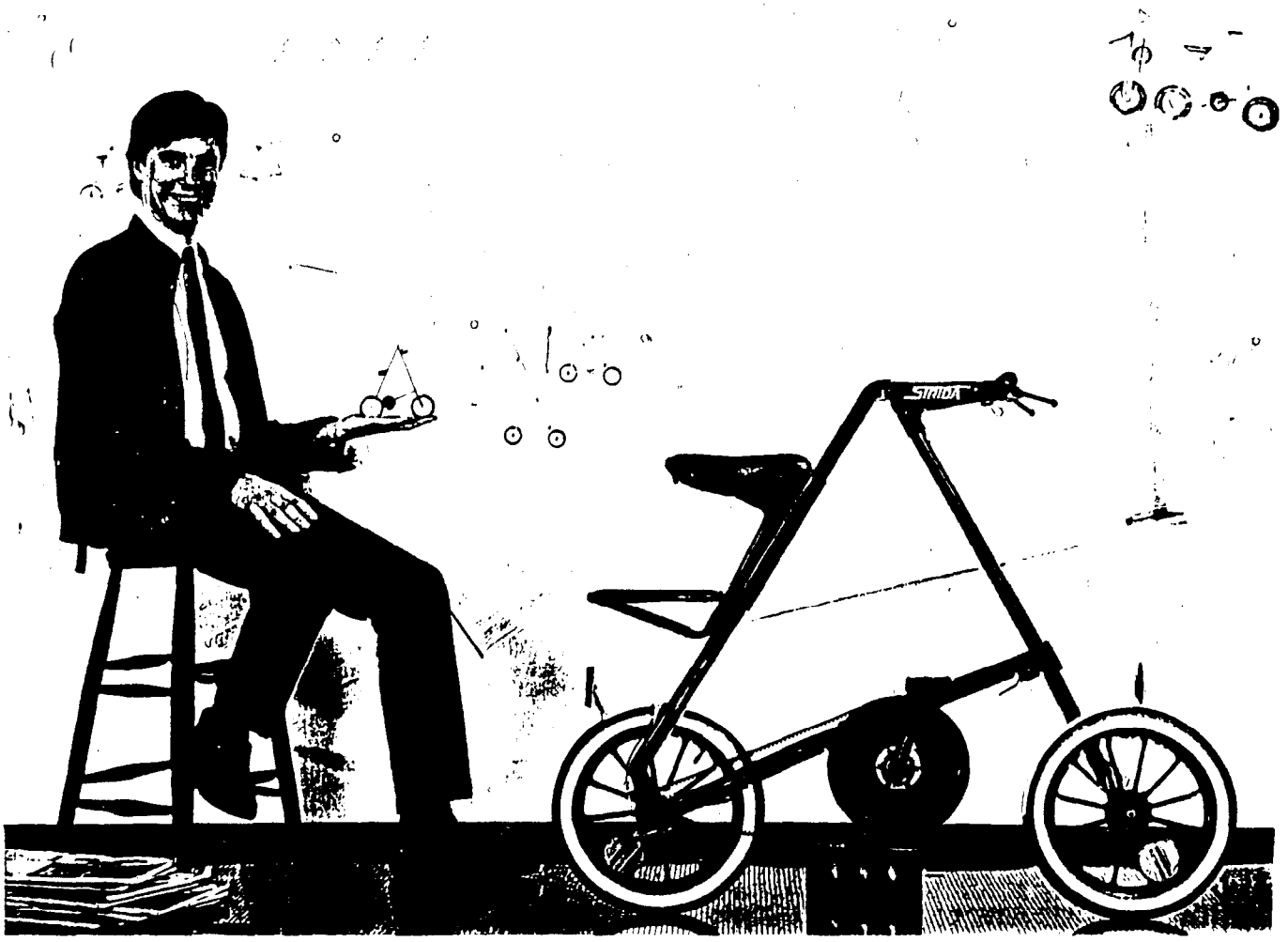
1. DON'T GET HURT

- Test market, market stalls first, stores last (market testing)
- Short leases not long (property testing)
- YTS not full-time employees (people testing)
- Shoestring early finance don't guarantee loans (finance testing)
- Good margins to cover selling costs (price testing)

2. WEAVE ANOTHER WEB!

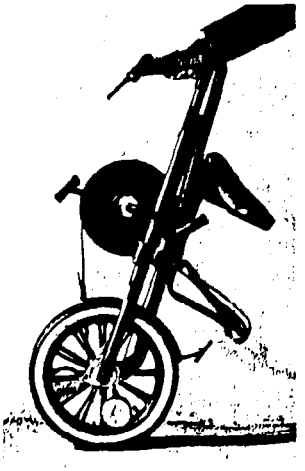
- Recognise what was good/remedy weaknesses
- Recognise opportunities (Connectair! Scoops!)
- Make new mistakes not old ones
- Keep making it 'good, different & newsworthy' (Bob Payton)

Source: Cranfield, After Professor Mintzberg, McGill University.



HIT US WITH YOUR RIDING STICK

Except for specialised racing machines, most bicycles – and especially most folding bicycles – don't carry the fashionable aura of high tech. Mark Saunders (above) thinks he's changed all that. Report by John Diamond. Photographs by Sandy Porter



The Strida folds up, when not bringing the glow of health (and saddle sores?) to the unfamiliar cheek, into a stick on wheels

Nothing quite so understates a new invention's case as the synoptic description on the title page of its patent registration. Thus Mark Saunders's new bicycle, the Strida, a prodigy of a machine which may have millions of us up and pedalling healthily any day now, is to the Patent Office no more than "Improvements Relating to Collapsible Bicycles".

Saunders is 28, an engineer who gave up designing vending machines for Mars Bars to return to college and study for an industrial design MA conferred jointly by Imperial College's Engineering Department and the Royal College of Art. It's the sort of course that annually produces shape-of-things-to-come copy for the industrial trade papers as students peer optimistically into the future and come up with the Twenty-First Century Toaster or the Ford Cortina for the year 2000. Invariably the designs look sleek in that futuristic, Buck Rogers School of Art way, and equally invariably they turn out to be no more than inventive casings waiting for the 21st-century technology to come along and make them work.

Saunders's design is different. Futuristic as his bike looks, it works now and has just gone into full-scale production. Saunders might not have re-invented the wheel, but he's redesigned its closest relation almost from scratch.

There have been, and are, folding light-weight bikes on the market, but the truly collapsible ones are seldom really lightweight and the really lightweight ones can be devils to fold and unfold. And those that combine both desiderata can make an unexpectedly large hole in the pocket, and are to be found almost exclusively in cycle-trade outlets, which the uncommitted may find intimidating.

The Strida weighs 22lbs and breaks down to a sort of bulky, wheeled ⟶

RIDING STICK continued

walking stick in seconds flat. And it is intended for Everyman, at an everyman price, from the kind of shop – department store or hypermarket – that the cycle trade warns bike-buyers to avoid if they expect aftersale service. There isn't much of the Strida to service.

Design work started while Mark was studying how to meld the RCA's form with Imperial's function, and neither college was keen. "Everybody said, 'Look, the bike's been invented in 1890. It's a classic redesign exercise – why can't you choose something like a toaster?'" says Saunders. "I had to fight to do the bike as my major project."

In fact although the Strida was a college project, most of the design work was done in Saunders's study, an 8ft square box that overlooks the neighbouring semis in Windsor. The room is dominated by a draughtsman's board, and the board by eight A3 layout pads which chart the progress of the Strida from idle doodle to production line.

The first book, labelled *Mark Saunders Bicycle Book 1* with a handwritten notice vesting all copyright in M Saunders © 1980 is full of first inklings of maybe germs of just possibly could-be ideas. By Book II Saunders has decided on the bike he wants to design. He has drawn a grid of squares: along the top are the various possible frame formations, down the side are the various possible wheel and drive formations. Each combination of frame and wheel is measured against a checklist of things the bike must have. Thing No 1 is *must fold to approx this size* (Approx this size is a stick with a wheel at one end.) No 2 is *easy to fold: one action, two at most;* 3: *accept range in people heights;* 4: *wheels together when folded*. And 5 is *wheels free to turn when folded*, "so that you can wheel it rather than carry it".

There are already folders which meet these criteria – but don't expect them to look simple or to be cheap: something looking like miniature scaffolding and costing £250-plus is not uncommon. The Strida is a triangle of lightweight metal with a small-diameter wheel at each of the bottom corners. The seat is bolted halfway up one side of the triangle and the handlebars are at the apex. The rear wheel is driven by a toothed rubber belt, not a chain. To fold the bike, the bottom bar of the triangle unclips at the front, the two upright sides hinge together and the bottom bar hinges to join them. Simple; and about £190.

The production version is hardly different from the prototype displayed at his degree show ("Isn't it light?" said the visiting Mrs Thatcher); or, come to that, from the one he constructed four years ago by hacking a scrapheap pushbike to bits and welding it back together again. "I had to work out a way of adjusting the bike to any angle so we got my father to try it – he's 6ft 4in – and my wife, who's quite small. And then there were things like finding out whether the ergonomics for riding on a triangle were right, and making sure the handlebars didn't hit the frame when you went round a corner.

"Before I built the prototype all I had were matchstick men with matchstick bikes. I was still thinking, 'Is this the best way to do it?' I mean in retrospect it's easy to pick out what the correct design solutions are. "For example, at one time the idea was that the handlebars were going to fold, and I spent weeks and weeks looking for ways of folding them.

"In the end we decided that there was no real need for folding bars. They're short enough not to have to." Other design decisions came more quickly: "Some things came in a flash of inspiration – like the catch which holds the bottom bar. With things like that I tend to work by leaving a problem to go round in my head – eventually the answer will just come out."

Like any good modern engineer who knows what went wrong with the British manufacturing sector, Saunders is as conscious of form as he is of function: "I try to make things work first, because my number one role in life is as an engineer, but my number two role is as a designer, so I try to make things look good too. But there are usually lots of ways to make something work well, and only a few ways for it to look good too."

But what if the best way of getting the bike to work had been to make it look as ugly as sin? "It wouldn't have been acceptable, of course. But it's amazing how often you find the right mechanical solution is often quite elegant as well. And one of the things I found working with designers at the RCA is that often the visual solution can suggest a new mechanical solution, and very often I'd find a problem couldn't be solved mechanically so I'd say let's leave the mechanical side and start thinking about what it'll *look* like. And because you're freewheeling you have lots of ideas about how it might look, and some of those ideas suggest a mechanical solution. It's very exciting."

In 1985 BBC's *Tomorrow's World* sent a scout along to an exhibition of work at Imperial and soon afterward one of the presenters signed off the show riding a Strida round the studio. "But of course they didn't say it was a prototype, so there were goodness knows how many people writing in to find out where to get one. But then I invited *The Sunday Times* along to the degree show, because I was trying to find a backer of some sort. They took photos and ran a piece in the "Innovations" column, which was just the right place for it. It got seen by people with companies, people who are in manufacturing. And one of them was James Marshall."

James Marshall doesn't strike one as the natural partner for Saunders. Saunders is a happy, self-effacing young suburbanite with a remaining trace of a Northern accent, Marshall is middle-aged, city-spruce and talks in the sort of Wodehousian tones that allow him to call total strangers "old chap".

When we meet, Saunders has just taken delivery of the first production model, complete in its final livery of black with a touch of primary yellow. Although Marshall is the money man, the colour scheme has been all his idea.

"I have very strong views about what I think the consumer will like, and I think Mark will probably agree that the black frame was my idea." Well, yes, says Saunders. "I said the frame would work in black, and Mark said it wouldn't, but it looks good." He looks down at the black bike with its yellow mudguards and logo. Yellow was Marshall's idea too, although retrospectively so. "I think that is almost psychic! You see I had a thing about this yellow the other day! And here it is, yellow!"

Marshall, who has variously managed golfer Greg Norman, put together a group to take over a couple of Rolls-Royce's extraneous companies and generally spent a life forming companies, turned up at the degree show with his secretary. "He asked me a lot of questions," says Saunders. "Very, very pertinent questions, like how developed is it for mass production and how much does it cost. Then he got Heather, his secretary, to take it out into the pouring rain and ride and then report back on what it was like." This was acid enough a test for Marshall, who set up a company to produce and market the bike. But not

Saunders's partner in the Strida enterprise. City gent James Marshall, on his unfolded product (no clips, no screws, no chain, no nasty oil). It was he who chose the colours

actually to make it. "My philosophy is I don't need to own factories, plant, equipment or masses of people. We own the design and we own all of the tooling that makes the bike. Then we forced the best deal out of the best manufacturers we could find who will make the bikes using our tools."

As far as Marshall is concerned, the Strida isn't in competition with other folding bikes – or with other non-folding bikes, come to that. The idea is to reach a market that hasn't, in the past, looked at cycling as an acceptable alternative to the Golf GTi. "We want to market in a different way from conventional bicycles. It's a very design-orientated, high-tech looking machine and it's virtually maintenance-free. There's no grease anywhere on it, which means you could touch any part of the bike and come away clean."

The Saunders marketing strategy means that the only cycle shops that are likely to sell the Strida are the ones who send up their own vans to pick stock up from the warehouse. The big sales are pitched to come from department and chain stores which until now haven't considered stocking bikes. Saunders and Marshall are nothing if not optimistic. They are looking for sales of around 8500 in the first year and already they've taken an order for 2500 in Australia.

As Marshall the money man carries on talking about marketing strategy and consumer preference and the cost of tooling, Mark Saunders looks on approvingly. Surely there can't be many Royal College of Arts students who recognise this sort of economic reality? "I recognise it because I've been on this route before. I gave up a very well paid job at Mars to go to the RCA, so I had to make it work for me. And if one day the result is I see people riding towards me on the bike I've designed, which they've actually decided to go out and buy well, that'll be fantastic!" ●

Source: The Sunday Times Magazine, May 31, 1987

APPENDIX 1

GEP Graduate Enterprise Programme

Confidential

Cranfield School of Management
Cranfield Institute of Technology
Cranfield Bedford MK43 0AL
Telephone Bedford (0234) 751122
Telex 826559 CITMAN G

SEMI-ANNUAL BUSINESS AUDIT REPORT:

END SIX MONTHS TO JUNE 1988

Name of person: .....

Name of business: .....

Where did you attend the GEP course? .....

What year did you start the GEP course? .....

Please complete and return this form in the envelope provided. The purpose of the Audit Report is to provide a means for you to let us hear about new opportunities and problems that you have experienced as your business has progressed. We may even be able to help! It will enable us to monitor the effectiveness of the programme as a whole. All information relates to the last six months.

In return we will mail all contributors with the GEP newsletter, summarising results and comments. This helps us all to keep in touch.

SECTION 1: Business account

1.1 Are you still in business on your own account? Yes ☐1 No ☐2

If 'No', please let me know what happened in a separate letter or on the back page.

SECTION 2: Sales

For the last six months, please indicate:

2.1 Invoiced sales value (in £'s). £ .....

2.2 Total number of customers sold to. .....

Any comments? (e.g. names of new major accounts etc.)

SECTION 3: Profits

3.1 Were you operating above your breakeven point over the past six months?

Yes ☐1
No ☐2

3.2 What was your pre-tax profit (loss) for the last six months (in £'s)?

£ .....

SECTION 4: Employees

		Full Time	*Part Time*
4.1a	How many full time and part time people were directly employed by your business, including yourself, in the last six months?	.....	.....
4.1b	How many full time and part time people were indirectly employed (e.g. outworkers)?	.....	.....

4.2 Do you expect to be taking on more people during the next six months?

Yes ☐1
No ☐2

Any comments? (e.g. type of people taking on etc.)

SECTION 5: New products/Markets

5.1 What new products did you launch/new markets did you enter in the last half year?

SECTION 6: General

6.1 What are the main problems that you are currently experiencing in any of the following areas?

Area:	Problems:
Finance/Accounting	
Marketing/Sales	
People/Communication	
Production/Operations	
Property	
Other (specify)	

6.2 How *confident* are you about the success of your business over the coming six months or so?

Not at all confident ☐1
Fairly confident ☐2
Confident ☐3
Extremely confident ☐4

6.3 Have you contacted any professional advisors in the last half year (e.g. accountant etc.)?

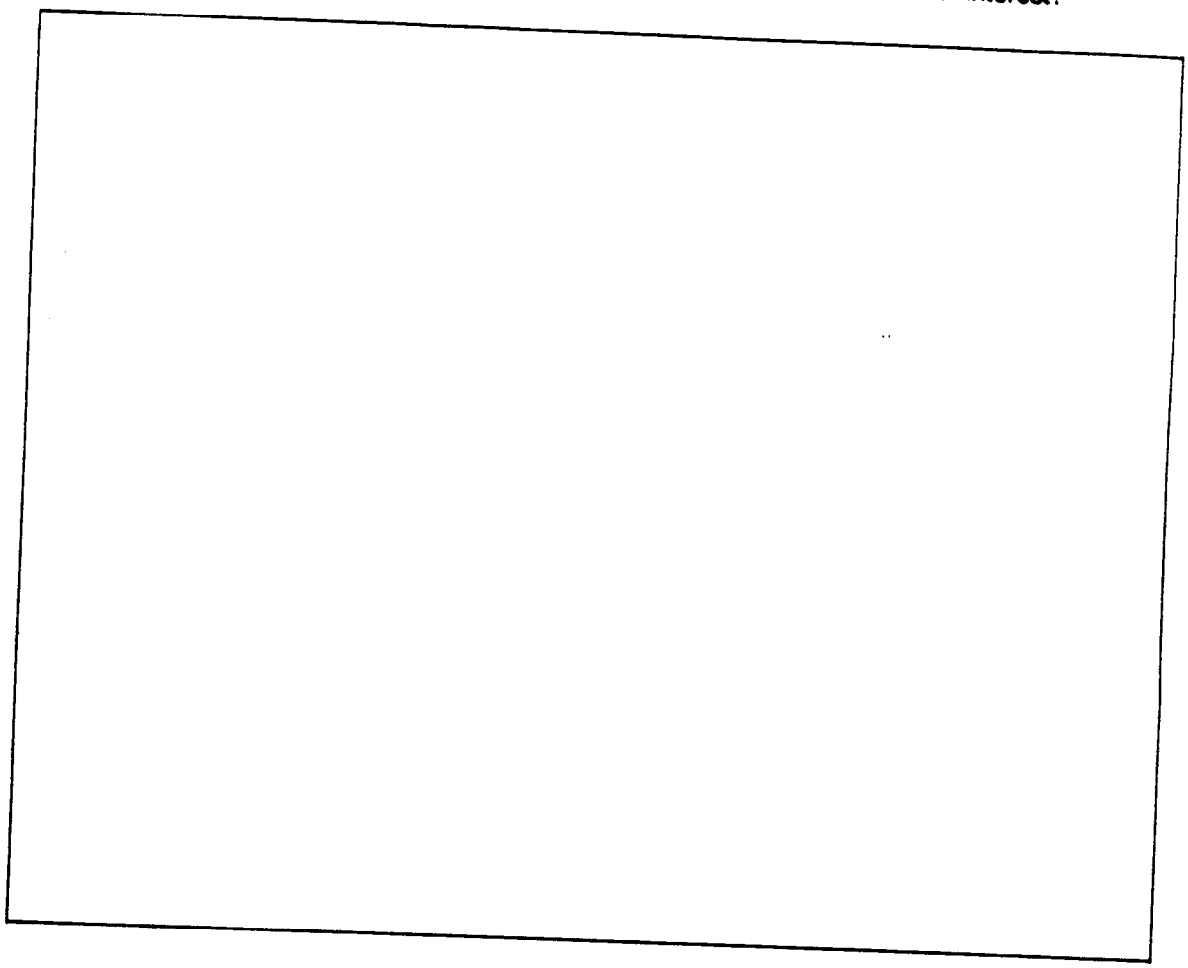
Please list

6.4 Do you feel that you require further advisory help? Yes ☐1 No ☐2

If 'Yes', where from?

SECTION 7: Newsletter update

7.1 Please use the space below to add information that would be of further use or interest?



Please enter your new business address (if changed since last half year).

.....

.....

.....

.....

.....

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THANK YOU FOR YOUR CONTINUED HELP IN COMPLETING THIS QUESTIONNAIRE !

References

1 David Story "the Role of Government in Promoting SME's", 17th European Small Business Seminar.

2 Sue Birley, "Small Business Issues" The Start-Up, forthcoming Macmillans.

3 David Trippier, Minister for Small Firms, Dept. of Employment. "I am dismayed by the fact that only one-third of one per cent of graduates in this country go into starting their own businesses from scratch, compared with two per cent in the United States and two and a half per cent in Japan". The London Evening Standard, Thursday, 22 January 1987.

4 Paper on Recruitment, Cranfield Working Paper Series, No. 86.10 87.08.

5 Colin Barrow, The Cranfield Workbook, to be published by Kogan Page December, 1987.

6 Michael Dixon. "The Government has enshrined "value for money" as a condition of educational institutions' public funding..... the development of performance indicators is now a hot topic at every level of education", Financial Times, October 12, 1987.

7 Pom Ganguly, UK Small Business Statistics and International Comparisons, p. 146.

8 Sue Birley. Encouraging Entrepreneurship. Britain's New Enterprise Programme, Journal of Small Business Management, October 1985.

9 Based on the evidence of the first four surveys (GEP 1, three surveys and GEP 2, one survey) student entrepreneurs seem to have little difficulty providing turnover, employee, new product/customer and break-even information. Net profit clearly creates difficulty; few of these numbers are produced by accountants or are audited. The net profit numbers and net losses reported are therefore, best estimates and are "management accounts" not audited numbers; but our interpretation of them is that they are a good guide to the underlying health of the businesses concerned.

10 Report on GEP applicants, Cranfield Working Paper Series, No. 87.12.

EXPORTING HANDICRAFTS

A check list

Be prepared to answer the questions and your chances of success will greatly improve.

1. Do you have samples?
2. Do you have catalogues?
3. Do you have photos?
4. Do you have prices?
   (With clear reference to written description or photos).
5. Do you have details of the product?
   (Size, colour, pattern, etc.)
6. Can any of these be changed to suit a customer's requirements?
7. What is your production capacity?
8. What are the comparative freight rates?
   (Land/sea/air)
9. What are your delivery times?
10. What are your policies on exclusivity?
11. What are your payment terms?
12. Is there any seasonal variation in production?
13. Do you have information on the producers?
    (Number of employees, hours of work, length of training, wage rates).
14. Has your product been properly tested e.g., for colour fastness, shrinkage?
15. Do you know about, does your product fulfil the necessary health requirements? (e.g., mohair must be certified "anthrax free").
16. Do you know about, and does your product fulfil any special requirements of the country you will be visiting? (e.g., the Federal Republic of Germany requires that ceramics be labelled 'not for food' if this is the case).
17. Have you obtained details of import documentation required for your product in the country with which you wish to trade? Similarly the export documentation your own country requires?
18. Are the products properly packaged for export? (air and sea freight packaging varies). Have you provided adequate protection against pests, humidity or damp?
19. How much of the product is consumed locally and how much is exported?
20. What are the projections for the product? (i.e. is production/export expected to increase?).
21. Does the country/this product benefit from any tariff concessions or customs agreements which would reduce its cost to the importer?
22. Who else is importing your product?