The Polytechnic is in a new and dynamic marketing environment. It has become a company requiring a surplus in trading within a changing and challenging atmosphere. Our departmental structures and organisations will have to respond quickly and positively in this new environment if we are to survive and prosper.

We are in competition. A new logo for the Polytechnic has been produced and a new image is being developed, but our marketing methods must be reviewed and our competitors must be watched. This article provides an analysis of specific aspects of marketing policy and activities for the School of Systems Engineering. It tends to concentrate on potential degree students as they are our largest market.

Although there is now a publicity department responsibility for overall marketing, each School and Department markets themselves through varying place, prices and promotion strategies, as well as the overall course content. Different departments may tend to concentrate on different geographical areas outside the UK. The only similar part of the marketing mix is the product. This remains as:- higher and undergraduate degrees, diplomas, research, consultancy and short courses.

Our customers may be regarded as the Government, potential students, their advisers, industry, consultancy contractors, the professional institutions and the Local Education Authorities. All of these need to be informed of our existence and persuaded to find out more about us. But there are also our internal customers: our staff and students.

The different benefits required by our customers can be summarised as:-

- The advisers of our potential students: Academic achievement.
- Government, LEAs and Industry: A reasonably priced qualification or skill.
- The professional institutions: Academic achievement and a record of research.
- Potential students: Student lifestyle, relevant qualification and reputation.
- Staff: Pleasant working environment, research and education.

Building on our Strengths
Although the competitive price for our services does not affect the main core of the business, our students do attend the Polytechnic to obtain benefits from us. Their needs must be monitored to ensure we are still supplying their wants and we must constantly review our courses. The total number of 18-year-old students is declining and macro forecasting and aggregate product/market estimates suggest the whole UK market may be in decline. In the short term, the A, B and C1 classes of UK 18-year-olds is constant and this may protect our market for a while, but in this environment the School of Systems Engineering must build on existing strengths - in the areas of Electrical & Electronic Engineering and Mechanical Engineering, while preparing and introducing new courses.
A Product Audit

Do our products provide more benefits than the competition?

Academic achievement:
An excellent record of Engineering degrees with first class honours and higher Engineering degrees.

A reasonably priced qualification or skill:
In the largest market segment our costs are similar to competitors.

Student lifestyle:
Situated by the sea with an excellent Students' Union providing over 150 clubs and societies.

Relevant qualifications:
Named degrees in Engineering which are recognised by the Engineering Institutions.

Reputation and a record of research:
Good reputation in schools and several internationally renowned research groups with a good publishing record.

A pleasant working environment:
The working environment may not always be pleasant!

A good job and a wider choice of jobs:
The degrees are recognised by the institutions and contain general engineering subjects.

What competitive product advantages are causing us to lose our market share?
The qualifications conferred by Universities are perceived as being of higher value and status than those of Polytechnics.
The names of other products are attracting students although the course content may be similar, for example Electronics as opposed to Electrical & Electronic Engineering.

Does each product still earn sufficient sales and a trading surplus?
The two main degrees (Electrical & Electronic Engineering and Mechanical Engineering) and their associated HND courses definitely provide a surplus. The other qualifications offered cannot guarantee a surplus on an individual basis.

If unemployment continues to rise, relevant qualifications, a good job and a wider choice of jobs, will become the more important benefits. We satisfy these benefits but must recognise our poor working environment and the effect this has on staff and prospective students as well as students already in the School. The inability of some courses to provide a positive contribution to the School in isolation has been recognised and an integrated degree scheme has been established to spread resources, costs and facilities.

Now that the Polytechnic is in direct competition with the Universities, attempts must be made to identify areas where the School is superior, or at least to highlight ways in which we are different. The perception of teaching and training in the UK and Europe is changing and the distinction between this and formal education may become blurred. We may lose our market share as the market becomes smaller and as Universities are perceived to provide a more valuable service and qualification. Our competitors are renaming products and presenting new products.

A GAP analysis shows a gap in market potential as compared with Germany or Japan and therefore a usage gap in the national market. This suggests we could improve our position and close the product line gap and the competitive gap with other Polytechnics and Universities. The School of Systems Engineering can increase market penetration by diversification and product development to modify our existing quality, style and variety. This may be achieved as our new courses are introduced this year. It may also be necessary to find new markets in other countries and other age groups. A strategy of diversification is suggested, but any new products should complement our existing product range.
Further analysis suggests we must ensure that we manage our portfolio of courses effectively and distribute our product through all of the available channels. We can use the trading surplus to finance new courses and balance the new courses which are at a risky stage with mature products. Our integrated degree scheme will help to spread costs and rationalise resources.

Although price generally affects the quantity sold, the price for the UK student market has traditionally been set by the Government. This may not be the case in the future as UK students lose their grants and other Government policy takes effect. Our prices may be undercut by other institutions. This has always been possible for foreign students and for industrial courses. In all these areas we must decide if the School is to be a quality institution and if we are, then we must charge quality prices.

Four factors influence our pricing strategy: the student needs, the market environment, the School of Systems Engineering and our markets. Low prices are unlikely to yield an increased market share and we need to aim to avoid competition on price alone, especially as the market may be inelastic to price. Attendance on our courses may be more dependent on customer benefits and their perception of us.

**Place**

Is our product available to students when and where they want it? Could we take the courses to them? This may be partly achieved with the Partnership Degree, the introduction of study packs, and the CATS rating system.

The geographical position and the image of the School is important. The location of the School may not be the best for the UK student market, but it does give good access to Europe and the comparatively rich engineering industries in the South of the UK. We are developing strong links with France and Germany. The place of effective sale may become less satisfactory to UK students as Europe becomes more accessible in 1992 and a foreign language becomes more desirable. Conversely we may become more attractive to the rest of Europe.

### Influences on the Behaviour of our Potential Students

<table>
<thead>
<tr>
<th>Influence</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>Foreign students and industry.</td>
</tr>
<tr>
<td>Product</td>
<td>Content and reputation.</td>
</tr>
<tr>
<td>Packaging</td>
<td>Names of the courses.</td>
</tr>
<tr>
<td>P.O.S Promotion</td>
<td>Name and condition of the School and the institution.</td>
</tr>
<tr>
<td>Previous experience of the product</td>
<td>Post graduate students and ex members of staff.</td>
</tr>
<tr>
<td>Personal Selling</td>
<td>School visits, research presentations, conferences, visits to the School of Systems Engineering, exhibitions.</td>
</tr>
<tr>
<td>Editorial Comment</td>
<td>Articles, media, journals, magazines and research publications.</td>
</tr>
<tr>
<td>Advertising</td>
<td>Conducted by the Polytechnic.</td>
</tr>
<tr>
<td>Image</td>
<td>The impression given out by the School. A concern for all the staff and our students.</td>
</tr>
<tr>
<td>Word of Mouth</td>
<td>From our staff, current students and our past students.</td>
</tr>
<tr>
<td>Competition</td>
<td>Other Polytechnics and Universities plus some Higher Education and Further Education Colleges.</td>
</tr>
<tr>
<td>Social Influences</td>
<td>Prefer a University?</td>
</tr>
<tr>
<td>Purchasing Power</td>
<td>Could be a new factor in the future.</td>
</tr>
</tbody>
</table>
The local area also provides access to a skilled technician labour force and provides possibilities for industrial consultancy and research.

The flow of information through the School, including the processing of prospective students, demand forecasting and loading, must be efficient. There are benefits in using an intermediary with local knowledge, especially in foreign markets such as Hong Kong and China. These “sub contractors” should be considered in the marketing mix and we should ensure a good image is being passed on by the schools' liaison officers. Unfortunately we must recognise that this reduces the level of our control.

Publicity
Promotion by means of the media appears to have an influence over the institutions favoured by students. Generally it is the research, project and consultancy work which creates this type of publicity. Our aim must be to create a favourable image and to reinforce positive attitudes towards the School. Our corporate image is communicated via our qualifications, courses, place of sale and promotion; including our buildings and technical equipment. Our promotional methods include personal selling through school and industrial visits and advertising in national and local media and articles in research journals. (It is difficult to use sales promotions in the usual sense). Our advertising should inform, persuade and reinforce our messages. We must be visible in the market place and foster good relations with the press and professional bodies. Attendance at research conferences and research activity can be especially useful for attracting publicity and reinforcing our message and these must be encouraged. Our secondary sources must give favourable recommendations. If this is to be achieved we must have our customer servicing and marketing right. Our courses will then be recommended by word of mouth.

Our sales objectives must be closely related to our overall marketing plan, including the mix of courses, the total number of students and the market mix. These lead to the formulation of an advertising plan.

| WHO: | The target audience are our external customers; the Government, potential students, their advisors, industry (including consultancy), the professional institutions and the Local Education Authorities. |
| WHAT: | All of these need to be informed of our existence and persuaded to find out more about us. |
| HOW: | Conferences, research presentations, media, journals, school visits, visits to the School of Systems Engineering, research publications, word of mouth/recommendation, magazines read by our target students, exhibitions. |
| WHERE: | Recommendation must be our most cost effective medium for advertising. |
| WHEN: | The advertising period should coincide with the acceptance of PCAS forms for entry to Polytechnic. |
| RESULTS: | Results of changing methods can be measured using the numbers of applicants and the number of acceptances. |
| BUDGET: | Large advertising expenditure is controlled by the Polytechnic Systems Engineering. |
The School of Systems Engineering does not employ salesmen as such, but all our staff and students are acting as salesmen all of the time.

Conclusions

- Market research should be initiated to distinguish between Polytechnics and between Polytechnics and Universities. Business objectives to be established in terms of product and market strategy. Attempts must be made to identify areas where the Polytechnic is superior or at least to highlight positive differences. Are we a quality institution?

- Target markets must be clearly identified and we should begin selective distribution to our target markets. This can be adjusted in the light of future data.

- We can increase the number of foreign students enrolling on courses, concentrating on our known markets and Europe. Our location is especially favourable for Europe.

- Student numbers can be increased in all areas providing accommodation is made available.

- We must ensure the technology in use is perceived as being modern and effective. This must be constantly reviewed.

- The names of courses can effect the take up of student places and we should investigate the renaming of our courses.

- Our research output is good but may not be recognised by our target market. We can publicise our research achievements in the magazines read by our target market, for example "Practical Electronics" and the computing magazines.

- Methods of selling could be reviewed. Low prices are unlikely to yield an increased market share in some of our markets and we should aim to avoid future competition on price alone.

- The Engineering degree has moved from the mature stage to the saturated stage on the product life cycle. This suggests diversification into other courses, using the trading surplus to finance new courses and balance the new courses which are at a risky stage with mature courses. The integrated degree scheme could fulfil this.

- Our main UK market is shrinking. We must find out what our potential students want so that we can begin developing or modifying our courses to satisfy these wants while still consistent with the benefits offered. We can begin with distance learning techniques and correspondence courses.

David Sanders
School of Systems Engineering
Conference Reports

Learning
Learning in Teams
in Teams

"First, let’s go round the circle and introduce ourselves!"

Twenty-four assorted academics, the motorway still unreeling before their glazed eyes, groan inwardly. Only just arrived, coffee barely taking effect, and already the embarrassment of introductions. But it was only to be expected at the start of a residential workshop - better get it over with. Twenty-four names, twenty-four half-heard reasons for wanting to be here, for wanting to find out more about the way students can learn in teams. Two dozen names, two dozen reasons float past, forgotten almost as soon as heard. But what’s this? "Now that you’ve heard what everyone has to say, come into the centre of the room. Use what you’ve just heard to form a team of six people that you’d like to work with!" Panic! What did they all say? That chap over there, he’s a biotechnologist - should get on with him. The Australian guy - wasn’t he a chemical engineer? And what did that Irish girl say she did....?

A few minutes later, seated in a corner of the room with five total strangers and the instruction to "form a team!". Well, that seems easy enough, at least. Just need to chat a bit, find out about the others, enjoy a little natter, wait for lunchtime. Half an hour later, we have settled into the familiar pattern of academic discourse. PCAS, CNAA, FTE, UFC, PCFC, LUFC... the acronyms trip from the tongue. We’re even close enough to read each other’s name badges, so the illusion of matelyness is complete. But the realisation slowly dawns - we may be a group (gaggle? flock?) of professional talkers, but a team we are not, nor likely to be at this rate. What should we do? Any ideas? Need an ice-breaker of some kind. A silly game? Anyone know any silly games? Twenty hilarious minutes later, we’re on our way, and a lesson has been learned: teambuilding is quicker and easier if you do something deliberately to foster it and don’t just sit around and wait for it to happen.

Later on we shall do what our team was formed for, and undertake a fairly difficult course planning task under tight time constraints, and we discover afresh that a properly functioning team can achieve far more than any similar number of individuals. We shall then apply that lesson to student learning. Group projects, of course, are already familiar in many engineering and computing courses: we discuss at some length the power of appropriate assessment methods to combat the problem of ‘passengers’ in the project team. We also think through other ways in which students can be encouraged to work co-operatively to enhance the performance of each individual. For instance, to ask a class (with their agreement) to form small groups with the express aim of helping one another to prepare for, say, a test. The edge to the exercise is this: while each student sits the test individually, he or she receives the average mark for everyone in their team. That means it is in everyone’s interest that everyone does well, and so self-interest is best served by co-operation, by sharing revision time and resources, by seeking assistance if you need it or offering it if you can help. Just an experiment, of course, but perhaps it will help engender a sense of the way everyone could do better by working together. That would be a major change of attitude for some. Not least, while student groups like this are strictly subject-based, some very useful ‘people skills’ can be picked up along the way.

The leader of our workshop at Warwick was Graham Gibbs, well-known for his series of books on teaching methods with titles that begin "53 Ways..." From him we learned