

Training for New Entrant Analyst Programmers

**A Submission to The Institute of IT Training
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for the category of

Training Project of The Year (External)

Training Organisation and Contact

Grahame Stehle
Partner
Stehle Associates
212 Piccadilly
London, W1V 9LD
Tel: 0171 917 9943
Fax: 0171 917 9944

Client Organisation and Contact

Tony Miller
Training Manager
Liverpool Victoria Group
Frizzell House
County Gates, Bournemouth, BH1 2NF
Tel: 01202 292333
Fax: 01202 751825

1. Overview

The Liverpool Victoria Group (LV) is the largest friendly society in the U.K. Based in Bournemouth, LV employs 1,500 people locally and 3,000 nation-wide. Their call centre uses advanced computer systems, and is the largest on the south coast. The environment is fast changing, and this leads to a need for a dynamic and responsive Information Systems Division.

The Information Systems Division (ISD) has an annual intake of new staff who need to be trained so that they can become members of the support and development teams. In November 1995, Stehle Associates was invited to bid for the provision of a course that would train delegates to be analyst programmers with an understanding of the business background to their work and the corporate environment. It was stipulated that on completion of the course, delegates must be able to make an immediate and effective contribution in the teams to which they are assigned, and that the successful service provider would design, organise and administer the course, as well as provide and present the training material. Stehle Associates was awarded the contract in December for a three-month course commencing January 1996.

This submission concerns a second class that ran from April until the end of June 1997.

Course delegates were drawn from within the organisation as well as outside. Around 400 applications were received and approximately three months were spent selecting those to be offered employment or transferred from other areas into ISD. No previous knowledge or experience of computer programming or systems analysis was required. This was a bold move but a necessary one because the required knowledge and skills are not available from within the local job market. Liverpool Victoria Group and Stehle Associates were confident that these skills could be 'home grown', and this has proved to be the case. An additional benefit has been that LV have been able to acquire these skills at realistic market rates and in a way that that means no time is wasted reorienting experienced people to LV's methods of working.

The pre-selection process used by LV is extremely effective and the delegates all showed considerable aptitude for the material, especially considering the breadth of subjects covered. Applicants are found through advertising the posts internally, in local newspapers, and via approaches to universities in Bournemouth and Southampton. The pre-selection process included an initial screening of applications, psychometric testing, and interviewing. Liverpool Victoria had high expectations of what delegates would be able to do at the end of the course and were prepared to make a considerable investment in applicants showing the necessary aptitude and achievement.

The organisation and presentation of the course was a major exercise involving many contributors and several sub-contracting organisations. The course covered the entire development life cycle and was focussed on the mainframe IBM CICS, and PL/I environment. The course was run as a systems development project, and at the end, the delegates had designed and implemented a travel insurance application. The application is based on one that has been in use at LV for some years.

2. Objectives

Liverpool Victoria Group and Stehle Associates worked together to define the following course goals.

On completion of the course, delegates will be able to:

- Understand the Liverpool Victoria Group's trading environment, and the context of strategic business systems;
- Know the organisation structure, reporting structure and relevant procedures;
- Know the procedures for safety and security;
- Investigate and describe a business problem or opportunity;
- Specify a technical solution to these;
- Specify and design new programs and enhancements;
- Write well structured and easy to maintain program code;
- Use their programming skills to address business needs;
- Apply these in the IBM PL/I and CICS environments;
- Solve problems arising out of the development and use of business systems;
- Operate effectively as a member of a development or support team.

The course programme is designed to satisfy these goals and each topic and training session has specific and complementary objectives. A continuous assessment programme coupled with mentoring and reviews, ensured that the required skills and knowledge were successfully transferred, and that corporate standards for IT were understood and applied.

Liverpool Victoria Group also set the following constraints:

- The course programme must be suitable for delegates with no previous knowledge or experience of programming in a mainframe computer environment;
- The course duration would be at least two months;
- The project would be a co-operative exercise between LV and the prime contractor;
- The cost per delegate day must be consistent with a typical in-house training course presented by an outside training organisation.

3. Strategy

The strategy that enabled Stehle Associates and other participants to achieve the objectives, had six key features:

i) Project Orientation - All training courses include practical work, but in this programme the course is a systems development project. The entire course was built around a case study based on an existing Travel Insurance application. Delegates were introduced to the case study within two hours of starting the course. For some this was also within two hours of commencing employment with LV. By the afternoon of the first day delegates had met with management (role-played by members of the training team) and started to define the requirements of the system.

The intensely practical nature of the course continued right through the life cycle, culminating in a presentation and demonstration of a working mainframe system. Delegates saw how requirements translate into working applications, and were exposed to all facets of the development process. The training was achieved not as a course with exercises, but like a real project where, from time to time, work is 'interrupted' and team members are exposed to a technique or process that will enable them to complete the work in hand.

ii) Continuous Assessment – When interviewed and when the course commenced, delegates were introduced to the mechanics of the assessment process. This process included:

- Written tests, which were set, marked and reviewed each week. These tests covered all aspects of the subject matter presented in the previous five working days;
- Fortnightly reviews of work-products, program documentation and code. LV staff who had mentoring responsibilities for the delegates led these sessions;
- Monthly reviews with career managers and facilitators to provide two-way feedback on progress and the training process;
- An end of course review when placements were communicated and when delegates were awarded certificates of achievement. Small prizes were also awarded in recognition of some particular aspect of a person's contribution to the team.

The assessment process not only checks that delegates are learning the topics covered, but instils a positive attitude towards quality assurance which survives beyond the duration of the course.

iii) No previous knowledge or experience is required – The minimum entry requirement to the course is an education to A Level standard, or an aptitude for computer work demonstrated during current employment with the Liverpool Victoria Group. In practice, most of the successful candidates had been educated to degree level although not necessarily in the field of computing. Business knowledge and

backgrounds varied and technical expertise ranged from none, or very little, to considerable knowledge of desktop applications and programming in languages like Pascal and C.

Whatever the background of the successful candidate, it was never likely that their previous experience would have prepared them for the IBM mainframe environment and for the development of mission critical systems for a major financial institution.

The course included sessions on the fundamentals of computers and computing, plus sessions that broaden delegate's knowledge and perception of information technology, and information systems. The course also fulfilled the LV Human Resources division need that it also be an induction into the company.

iv) Core competencies are addressed – The course is broad based and is aimed at making people useful and productive members of the team as well as competent analyst programmers. A key aspect of the strategy is to avoid a parochial approach to training in subjects only pertinent to the goals outlined above. Thus trainees were exposed to many exercises and simulations that developed their ability to work in a team, to lead a team, to communicate effectively, and to be able to present findings and recommendations. Considerable emphasis was placed on developing the ability to analyse and solve problems.

v) Seamless integration of materials and sessions – Every trainer and presenter, no matter whether from Stehle Associates, LV, or another organisation, was briefed and understood their role in the context of the entire course. Trainer and facilitator meetings were held before and during the course, and every effort was made to ensure that delegates were not exposed to conflicting advice or different interpretation of standards and procedures.

Most materials were of a similar format and style and all the sessions contributed in some way to the achievement of the goals. All exercises and practical work were in the context of the case study project and almost all sessions led to (or followed) practice and application of what was taught.

Whilst the logistics of ensuring this were daunting, Stehle Associates worked with all contributors to ensure that quality standards were properly maintained and achieved.

vi) Mentors – Delegates from the previous year were appointed mentors. Their role was to guide new hires through their first few months with the company and to participate in, and facilitate, some of the sessions. The mentors play a key role in quality assurance of work products, and used their own experience on the course, and time in the job, to provide guidance and inspiration, especially to those new to computers and programming.

4. Results

The results of this and the previous course have been widely acclaimed within the Liverpool Victoria Group. LV management is completely satisfied that the course goals have been achieved for every delegate. Specifically it is evident that:

- Delegates have been able to make an immediate contribution to the team to which they were assigned;
- They have been able to support existing systems as well as develop new programs and enhancements;
- They have been able to apply their new-found skills with confidence because of their knowledge of the Liverpool Victoria Group, its strategies and IT needs;
- Delegates have been found to be more disciplined and committed to standards, and more able to relate their work to the tactical goals of the business unit concerned.

Liverpool Victoria and Stehle Associates believe that such results could not be achieved by separately developed courses with different styles, unrelated exercises, and a mix of presenters working more or less independently of each other. Stehle Associates' expertise, combined with a policy to only involve real experts from outside Stehle, has resulted in a course that is fun, challenging, and rewarding for all concerned. Through its design and delivery, the course exceeds the expectations of all concerned.

The acid test of success is, of course, whether Liverpool Victoria Group would repeat this exercise again. We are pleased to report that a third class has been arranged for thirteen weeks commencing January 12, 1998.

5. Summary

Stehle Associates has specialised in new hire and graduate training for many years. This course demonstrates how a professional approach to training together with a keen understanding of how people learn and develop new skills, can deliver far more than an ad hoc or unstructured approach.

The focus on running the course as a project is key to the programmes' success. This innovative approach provides delegates with an understanding of exactly how they will be expected to operate on completion of the course, and means that they can be productive immediately.

The course has been incredibly successful in terms of the motivation of the delegates and the bonding between them. This has been sustained long after the course ended in the form of a willingness to help each other and to tackle problems in an open and co-operative manner.

The use of LV staff as an integral component of the programme ensured that delegates understood the working environment and standards to which they must adhere.

The course has been found to meet its objectives without qualification. This statement is not based on hearsay and speculation but is the stated position of Liverpool Victoria IT management and senior staff. Those who were in training only a short time ago are now working with other team members to deliver high quality results in a dynamic mainframe development and maintenance environment.

Perhaps the ultimate test of any training is whether delegates find that the skills covered are applicable in the field. Without exception this has been the case. It is also very satisfying for all concerned that the entire project has been a most enjoyable experience.

6. Appendices

Appendix 1 - Course Schedule

Appendix 2 – Contracting Organisations and Personnel

Appendix 3 - Course Photographs

Appendix 4 – Example PL/I Knowledge Test

Appendix 5 – Example Topic Assessment

Appendix 6 – Example of Materials

Appendix 7 - List of Liverpool Victoria Group Contributors

Appendix 8 – Client Comments