

TRANSFER OF TECHNOLOGY

LIRA's Role

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Introduction

The measure of a research organisation is often the length of the list of publications it produces each year. The publish or perish syndrome. An equally important measure is the amount to which research and developed concepts are implemented by managers, supervisors, contractors and bushmen; a much more difficult measure to substantiate or quantify. This paper looks at some of the practical methods of transferring technology. Some are currently practised by LIRA, and are outlined in the preamble to the questionnaire while others merit serious thought.

Extension Techniques

All the techniques to be discussed here are supportive to written publication. As a publication shouldn't stand on its own, neither should any of these.

Field Demonstrations

The most effective way of dealing with a large audience over a short (one day) period of time is the field demonstration. Ideally, when a researcher is at the stage of writing up his study results he should consider how best to demonstrate in the field his findings. The information on the demonstration should then be distributed at the same time as the reportage of the study.

The following list are some of the key points that should be considered in planning a demonstration.

- (a) Set it up. Ensure that what you want to illustrate is being shown. Nothing destroys a demo quicker than a large group being witness to a shambles.
- (b) Don't try to illustrate too many variables.
- (c) Remove any possible distractions, i.e. if you are demonstrating felling presentation technique and its effect on extraction, concentrate on that, don't have a diversion such as a Bell sorting and loading at the landing.

These are only a few of the points which need considering. Field demo's are difficult and often time consuming to set up, which is possibly why they aren't used more frequently. Most of the research conducted by LIRA is oriented to a field demo.

A field demonstration only goes so far towards dissemination. They are normally held in the Bay of Plenty, which is fine for those coming from that area, but difficult on people from outlying areas, especially the South Island. It is essential that training personnel be invited to any demonstration which involves new techniques as they are the people who are relied upon to pass the information to the bushmen.

Competitions

There are two types of competitions to consider. Both types are briefly mentioned by McCallion (Ref.1). Firstly, the use of management games approach. This technique was tried, to a certain extent, by LIRA with short evening courses for contractors based on the costing handbook. It was basically an unqualified failure. The fault lay in trying to cram too much information into two hours which would have been better done over a full day session. Also, as part of the presentation was done by Technical college computing experts LIRA lost some of the control over the content. If this type of technique is to succeed, full control over content and presentation must be maintained. Unfortunately, the programme was not perservered with when a changed format may have been successful.

The second type of competition, the more direct approach, such as a felling competition. McCallion (Ref.1) recommended that LIRA should act as a consultant on work procedures to competitions. I disagree with this and feel that LIRA should take a more positive role in the setting up of competitions, especially formulation of the rules. If you are trying to emphasise a new technique. Felling method, which is recognised as giving better directional control, then the competition should be set up so those who are using the correct technique have the best chance of winning.

Training

New techniques or new equipment will not be employed or, at best, only slowly, unless a positive role in introducing them into the training systems is adopted. The development role of LIRA requires training of management personnel, crews, and/or operators, who are being introduced to the new system, methods, or machines, and these people may be used to both test the concept and demonstrate them to others. But, no real progress will be made unless the new technology is incorporated in the industry training system. Thus it is important that LIRA have the capability to not only set up the training system for new technology, but to become involved in providing the training aids required and in the initial training of the personnel from various training organisations who will be responsible for passing on the new knowledge. The training organisations are the "multipliers" of knowledge and it is only they who have the capability of reaching all the relevant personnel in the industry.

Courses

A course may be the result of a major seminar or, more likely, of the publication of a handbook. As an example, the cable logging course has been used to illustrate how a course and a handbook can be used complementary to each other. The course, aimed to improve

cable logging understanding, has been established and run in conjunction with F.T.C. The course is set up along the lines of the proposed handbook to supplement that. The objectives of the course and handbook are, improve the knowledge of skills and equipment associated with cable logging, gain an understanding of technical details, capabilities, advantages and disadvantages of different cable systems, and improve the management of hauler extraction in New Zealand.

Working Groups

In all its major project areas, LIRA uses a working group, formed of relevant people with industry to monitor progress and to ensure that research and development, which they felt was relevant, was undertaken. These groups are also recognised as an important part of taking research and developed concepts back to their respective management to be implemented. The working group is seen as being an integral part of the extension effort of any LIRA project.

Conclusions

Having intimated that we, LIRA, are possibly not doing as much in this practical extension area as is desirable, I would hasten to point out that we would welcome more involvement from other organisations, such as the training groups represented by the other members of this panel and logging sports organisations, and those deciding on education of supervisors.

Research organisations should stop counting their reports as the measure of their effectiveness, but look more to how much is being implemented by the industry they serve.

Extension should not end with the publication of a report on a study, but rather, when a significant part of the industry is applying the lesson in the field.

Ref. 1 - On modelling the New Zealand logging industry to study factors affecting its operational efficiency. H. McCallion, Professor of Production Technology, Department of Mechanical Engineering, University of Canterbury, LIRA PR12, 1980.

