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Pair wise ranking made easy

Tim Russell

· Why pair wise ranking is used for prioritising

Pair wise ranking is often used by social scientists, and increasingly by community development workers, as a means of prioritising or ranking lists prepared by communities. Common examples are lists of problems, projects or commodities, such as trees for planting in forestry programmes. Ranking these lists helps communities decide which are the most important things to do, for instance are drinking water supply problems more important that loans for oxen? What should be started first, a road to the chief's palace or a stream crossing to a school?

When valuable resources are involved, those with the loudest voices, who are often the most powerful, tend to be heard and get their way. Furthermore, each person has a natural bias toward their own concerns and areas of interest. It is therefore important that when communities are making important decisions about resource use, a method for making these decisions is used that gives all involved a chance to have their views heard.

The standard pair wise ranking method

Pair wise ranking in which each item on a list is compared in a systematic way with each other provides such a method. An example of this is given in Table 1. To construct this table, each problem was compared in turn with each of the other problems. Thus "*Lack of fertiliser*" was compared first with "*Lack of transport*". The community found that "*Lack of fertiliser*" was more important than "*Lack of transport*" and so a '1' was placed in the cell in the "*Lack of fertiliser*" row under problem number 2 ("*Lack of transport*"). This was repeated with the next problem "*Poor roads and bridges*". In this case "*Poor roads and bridges*" was a more important problem than "*lack of fertiliser*" and so a '3' (for "*Poor roads and bridges*") was placed in the "*Lack of fertiliser*" row under problem number 3 ("*Poor roads and bridges*"). This was repeated until all problems had been compared with problem number one, "*Lack of fertiliser*".

Table 1. Pair wise ranking of development problems in Miputu, Ndola Rural District, Zambia

	Problem Number									
Problem	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**Score**	**Rank**
1. Lack of fertiliser and seed		1	3	1	1	6	7	1	4	4
2. Lack of transport			3	2	2	6	7	2	3	5
3. Poor roads and bridges				3	3	6	7	4	6	2
4. Lack of work oxen and implements.					4	6	7	4	2	6
5. No consumer shops.						6	7	5	1	7
6. Lack of clinic							6	7	7	1
7. Lack of classrooms and houses								5	5	3
8. Lack of market									0	8

Source: PLA Notes (1997), Issue 28, pp.25–26, IIED London

Table 2. Pair wise ranking exercise conducted by Kafulafuta Village, Zambia

Problem	Score (As seeds or stones)	Score
Lack of wells	|||||||||||	12
Broken bridges	||||||||	9
Clinic not big enough	||||||	6
Hunger	|||||||||||||	13
No market for honey			1
Lack of transport	|||||	5
Theft		0
Dam broken	||	2
No hammer mill	||||||	6
Few oxen for ploughing	|||||||	8
No timber for coffins	|||	3
Poor cooperation between people	|||||||||	9
School not big enough	||||||||||	11
Roads need repairing	||||||	6

Problem number 2, "*Lack of transport*", was then compared with the next problem, "*Poor roads and bridges*. In this case "*Poor roads and bridges"* were a more important problem than "*Lack of transport*" and so a '3' (for "*Poor roads and bridges*") was placed in the "*Lack of transport*" row under problem number 2 ("*Lack of transport*"). Again all subsequent problems were compared with "*Lack of transport*". This process was repeated for all problems until all possible comparisons had been made and the matrix was completed.

The number of times a problem had been found to be more important was measured by counting the number of times its problem number appeared in the matrix. Thus there are four number '1's in the matrix. The problem number to appear most times is said to be the most important problem. In this example, problem number 6, the '*Lack of clinic'* appears more times in the matrix than any other problem (seven times). It was therefore considered to be the most important problem. This was checked with the participating community who agreed that this was the case.

An alternative pair wise ranking method

Although an unbiased comparison of all problems is made with this method, the construction of the matrix can become very tedious (as no doubt reading the above explanation became tedious to the reader). It is also difficult for all, but the most numerate, to understand. Thus to make this technique quicker to execute and easier to understand, a modification of this method was developed during a PRA in Ndola Rural District, Copperbelt, Zambia. This uses stones instead of numbers. The results of this method are shown in Table 2.

Problems were compared in the same way as in the previous example, but with one difference: for each comparison, a seed was placed next to the more important problem. In this way a line of seeds grew next to each problem, the longer the line, the more severe the community considered the problem to be.

Even though fourteen problems are listed in this matrix, it was completed in half an hour. It was also possible for the participants to see the result of the exercise materialise as it was completed. This was done, not from reading a number, but from observing the comparative lengths of lines of stones or seeds.

A disadvantage with the system is that a record of the results of each comparison made is not kept. However, this seems to be a minor loss compared with gains in clarity and understanding.

- **Tim Russell,** Lakeland View, Galegreen, Westhouse, Via Carnforth, Lancs. LA6 3NJ, England, UK.

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