

Learnings from assisted personal reflection: Using self study methodology

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The Context

- In Australia there are numerous programs, both large and small, designed to enhance school mathematics, science and technology through involvement of STEM professionals.
- In recent times the ReMSTEP initiative has encouraged the involvement of STEM professionals within pre-service teacher education programs.
- At Deakin there have been a number of separate initiatives primarily under the ReMSTEP umbrella which involve STEM professionals in various ways within the teacher education programs. Peta White has had prime responsibility for most of these; David and Russell constitute a critical friend group who have collaborated in this research.

Purpose of this study

To assist Peta White, the key teacher educator, in a participative self-study reflecting on her role in the research and learning from her involvement in these initiatives in order to:

- provide data relevant to evaluation of the initiatives; and
- assist Peta to reflect on the program as part of its ongoing refinement.

Data collection

Peta was interviewed by David, one of her critical friends. David had not been involved in the planning or execution of the program. Five interviews each of about one hour in length were conducted.

The pattern of the interviews was to allow Peta to talk about each of the seven research models enacted to undertake the research. Where it seemed useful David asked questions based on his extensive experience in studying education programs involving STEM professionals.

Data analysis

The interviews were transcribed and the critical friend (David) identified issues which emerged from the data.

A structure was then developed to group together related issues.

General issues

The analysis revealed a number of general issues reflected in the data:

- an assumption that the impact of the activity can be maximised through the production of classroom materials for use in schools;
- a concern to develop students' understanding of science as a human endeavour; and
- the challenges associated with the approach adopted.

Issues related to the involvement of the various groups of participants in the program

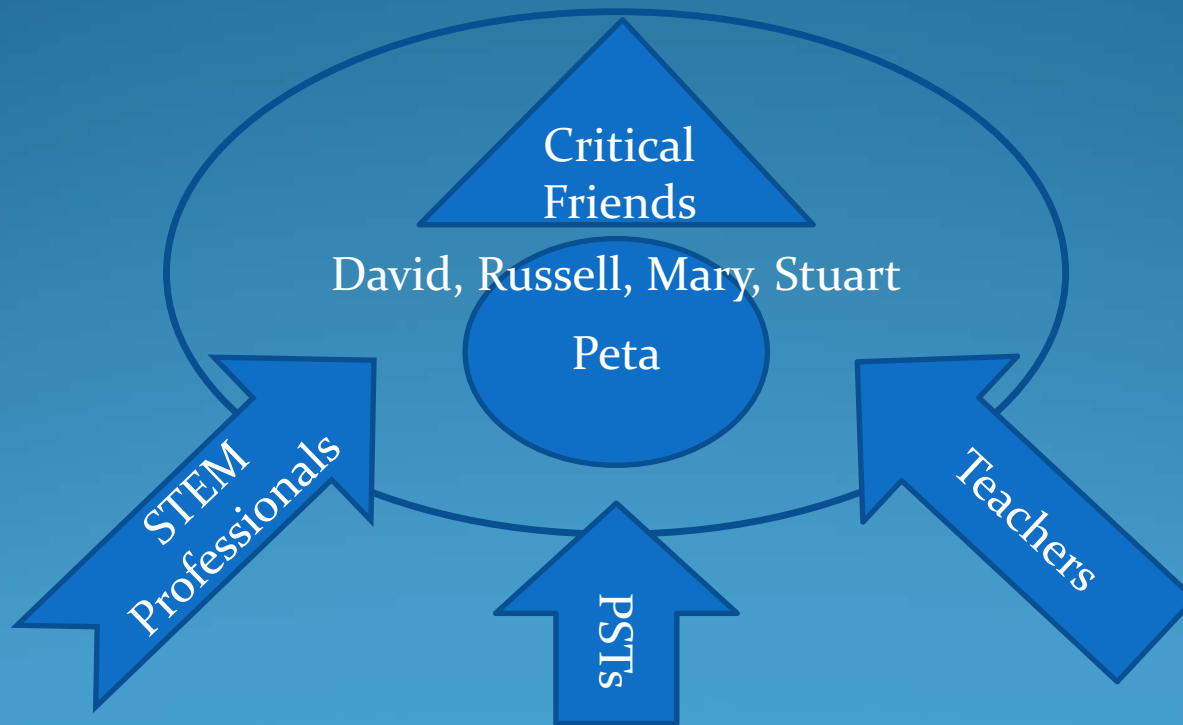
The analysis also revealed that a significant proportion of the interview data consisted of reflections on the involvement of the various groups of people in the activity:

- the educational academics;
- the STEM professionals;
- the pre-service teachers;
- the teachers; and
- Peta herself.

Example: Issues raised concerning the pre-service teachers

- There was significant variation in the extent to which the pre-service teachers (PSTs) could engage with the STEM professionals and the science.
- Assessment is a primary concern of the PSTs.
- The PSTs did not take seriously the need to operate within copyright law when producing products which others could use.
- Many PSTs have a very limited range of teaching/learning processes on which to draw.

The impact of self study methodology



Thank you