

A typology of meanings: Practitioners views of 'program'

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Abstract

Previously published work has identified confusion in the definition of the term program. This paper reports on a study investigating the understanding of program terminology within a sample of experienced management and project management practitioners across a range of industries and disciplines. The study was conducted in Australia which is subject to influence by both USA and British practice, without being constrained to favor either, but where any inconsistencies between these influences are potentially problematic. The outcome was that confusion on this issue was found within the practitioner community. Furthermore, this confusion had developed into a competition between fields over exclusive usage of the term to the extent that one organization had even attempted to resolve it by attributing different meanings to the two different nationality spellings of the term. No common understanding or definition of the term was articulated and there was contention over whether a program has to be transformational to be labelled as such. The boundaries with the terms project and portfolio were also unclear. The existence of these inconsistencies indicates there is a need for an internally consistent set of definitions of project, program, and portfolio to be agreed and adopted across the whole project management field.

Keywords: program management, programme management, project management, transformation, benefits realisation, change management

1 Introduction

Confusion within the practitioner community over the meaning of the term program was documented by Reiss (2007). The choice of a label (project or program) can affect what methodology is selected to manage an undertaking. It is therefore imperative that the boundaries of labels are clear so that inappropriate choices are not made with adverse consequences for progress, cost, and reputation.

Differences in approach to program management are evident in the latest versions of alternative practitioner guidance documents. MSP focuses on transformational change with Section 1.1 claiming "MSP represents proven good practice in programme management in

successfully delivering transformational change” (Office of Government Commerce (OGC), 2011). However, the Project Management Institute (2013) does not mention transformation.

McGrath and Whitty (2019) conducted a review of program terminology across a range of practitioner documents and found that confusion still exists. While they proposed definitions to overcome this, the purpose of this research is to determine whether confusion exists within the practitioner community about what a program is, whether practitioners consider it must be transformational to be so labeled, and what issues might be causing any confusion that may exist.

This is formalised into the following research questions (RQs):

RQ1: Does confusion exist in project management practitioner usage of the term program?

RQ2: Do all practicing project managers consider that a program must involve transformational organizational change?

A literature review is first conducted to see if there have been any other reviews of practitioner views on this subject. The research is then designed by selecting the instrument, designing the questions and selecting the sample. An evaluation method is then determined. Interviews were conducted and the results reported and analyzed before being evaluated and discussed.

2 Literature Review

Various searches of all aggregator EBSCO databases were conducted on 19/10/2017 for a range of terms with results as follows:

- “definition of the program” in titles – 26 found, none relevant
- program term in titles – 8 found, none relevant
- review program terminology in all fields – 6 found, none relevant
- review program definition in all fields – 157 found of which 81 were non-duplicates and none were relevant.

Searching for ‘program’ returned results for ‘programme’ as well. Abstracts were examined to determine relevance when this was not evident from the title. These searches identified particular programs in a wide variety of fields, but all were concerned with their content rather than with the usage of the term itself. It appears therefore that it may only be within the field of project management that the definition is a problem and we, therefore, looked at more broad reviews in that field.

The term is defined in various project management standards and reference documents and so a search of all EBSCO databases was conducted on 1/10/2017 for both ‘review of standards’ in the title and ‘project management’ in the text found no relevant reviews. A similar search for ‘comparison’ in place of ‘review’ found no relevant reviews and a similar search for ‘examination’ found one relevant review, namely Crawford, Pollack, and England (2007). This lamented the different understanding of words in different cultures but contained no evaluation of program definitions.

A search of all EBSCO aggregator databases on 21/11/2017 for ‘program’, ‘management’ and ‘practitioner’ in the title found 25 items. All were examined, and none were relevant.

A search of all EBSCO aggregator databases on 3/11/2017 for “management term” and ‘confusion’ in any field found only one item. This was by Kang (2015) concerning change management. It did not deal with the definition of the program.

A search of all EBSCO aggregator databases on 21/11/2017 for ‘program’ and ‘confusion’ in the title found 157 items of which only 78 were non-duplicates. All were examined, and none were relevant to the definition.

We then examined the project management definitional website (Wideman, 2017). The term program does not appear on the site index but is included in the glossary itself. Several definitions of the program are given but no comparative analysis or reconciliation of definitions is attempted.

In summary, the literature review has not found any prior investigation of practitioner views on program terminology. Having established as far as can reasonably be determined that there has been no previous work along the line we are investigating, we then proceeded with our investigation.

3 Research Design

These RQs call the use of a qualitative method of data collection.

3.1 Instrument selection

Conducting some form of the survey was not considered appropriate as this would not facilitate exploring issues in depth relative to the particular circumstances of individual participant organizations. As Wengraf (2001) noted:

Decades of research into the positivist model of the survey questionnaire and the instrumentation theory on which that practice of fully structured questioning depends have produced numerous insights and many oversights (Mishler, 1986; Briggs, 1986) suggesting that, instead of a single and coherent universal instrumentation theory, all that we can have is a constant reflection upon the successes and failures, the strengths and weaknesses, of particular instrumentation practices (Wengraf, 2001, p. 62).

Fontana and Prokos (2007, p. 23) considered “Face-to-face interviews have many advantages over less interactive methods. As Shuy (2002) notes, many situations benefit from face-to-face interviews, including those in which the interview is long, or includes complicated topics or sensitive questions”. Program management is a complex subject and face-to-face interviewing was considered an appropriate means of canvassing it while avoiding positivist oversight.

We nevertheless sought to structure the interviews so they did not become undirected conversations leading nowhere. Fontana and Prokos (2007, p. 19) noted that in structured interviewing, “all respondents receive the same set of questions asked in the same order” and “The interviewers must perfect a style of ‘interested listening’ that rewards the respondent’s participation but does not evaluate these responses (Converse and Schuman 1974)” (Fontana & Prokos, 2007, p. 20). This was appropriate for our particular research questions and suggested the use of a semi-structured interview which Wengraf (2001, p. 1) noted as appropriate for depth interviewing. Barriball and While (1994, p. 330); Fontana and Prokos (2007) also noted: “semi-structured interviews are well suited for the exploration of the perceptions and opinions of respondents regarding complex and sometimes sensitive issues and enable probing for more information and clarification of answers”.

Wengraf (2001, p. 162) noted “Semi-structured interviewing is characterized by an emphasis on relatively open questions. However, you may wish also to put certain closed questions”. Fontana and Prokos (2007) said: “the structured interview ... often elicits rational responses, but it overlooks or inadequately assesses the emotional dimension” (Fontana & Prokos, 2007,

p. 22). The authors have observed that the definition of program is a subject that can induce strong emotions and Whitty (2010) also noted the influences of emotions in project management behavior. We, therefore, wished to capture these emotions.

We, therefore, decided to use semi-structured face-to-face interviews with a combination of open and closed questions.

3.2 Question design

Question design was based on the categories of questions used in a management study by Kummerow and Kirby (2013). These categories were evaluation, personal experience, and context. Their questions were a mixture of open and closed. The actual questions used in our study were tailor-made for its RQs and were only very loosely based on the actual Kummerow and Kirby (2013, pp. 542-544) protocol as their investigation occurred within a contained organizational boundary and was more amenable to statistical analysis than the RQs posed here.

For these particular RQs, it was appropriate for the interview questions to be open, with closed questions being used principally as prompts.

The interview strategy was to first confirm the background/ context of the person by determining various classificatory factors, then ask the pre-determined interview questions. The background/context factors were:

- the sector of their organization (Public or Private enterprise (G=Government, P = Private, H = Hybrid))
- the area within the Sector (SG = State Government, LG = Local Government, SGA = State Government Authority, M = Manufacturing, E = Education)
- the person's work type = the type of products worked with (I = Infrastructure (Civil/ Building/ Electrical/ Mechanical), IT = Information Technology, including IT infrastructure, BD = Business Development).

This particular study was conducted as part of a broader study examining various project management topics and for the practical reason of limiting the time involvement of participants, only one question could be allocated to this topic. As definitional questions tend to promote thought, reflection and discussion, a definitional question was devised that also asked for both individual and corporate views to expose any conflicts or contradictions.

The question developed was: How do you/ does your organization distinguish between a program and a project?

Other closed questions were asked by way of 'impromptu' prompts to either stimulate further observations or to clarify meaning when the response was not clear. In the latter cases, a summary or interpretation of the view expressed was related back to the participant for confirmation or correction.

In response to another (non-program) question asked during the interviews, one participant response related to program management and this has been included in the findings below.

3.3 Sample selection

RQ1 and RQ2 were framed deductively. This rendered statistical analysis inappropriate and so it was not necessary to have a statistically significant minimum sample size for the purpose of gaining inductive confidence.

The likelihood of detecting false disagreement was reduced by selecting only people who were both knowledgeable on the topic and held organizational positions where they would be required to implement their knowledge. This avoided assessing issues of training and experience. The people selected were all at least either head of a project management support office or a program manager and several headed large infrastructure delivery organizations.

The likelihood of detecting disagreement was increased by selecting the interview sample across the boundaries of discipline and organization type. A range of these was selected; from government and private enterprise, from physical infrastructure and IT, and from consulting and project owner organizations.

The sample location was also considered. The researchers are based in Queensland, Australia, and consideration was given to whether participants would be selected locally or from interstate or overseas. Australia sits at the cultural and geographic crossroads between England/ Europe, the Americas, and Asia. Local members of The Australian Institute of Project Management are heavily involved with the International Project Management Association (IPMA) and local practitioners were involved in the development of the first PMBOK. The Project Management Institute (PMI) also has a strong local presence. This, together with the ease of global communication, global access to databases and the existence of internationally accepted bodies of knowledge should ensure that world-wide trends influence local participants. It was therefore considered that the sample could be selected locally. Framing the key RQs deductively rather than inductively also avoided sample size and location effects.

Potential organizations and candidates were approached and 21 experienced managers and project managers agreed to participate and were interviewed.

3.4 Method of analysis and evaluation

The method of analysis was an audio recording of the interviews followed by transcription, then manual analysis of the transcripts to identify themes, including any categories or typologies of understanding that the transcripts revealed, and any issues that emerged.

The evaluation of RQ1 is straightforward from the perspective that if everyone interviewed indicates the same understanding of the term program, then confusion is not established and there is then no contest or disagreement identified among practitioners requiring resolution. However, if this is not the case, then confusion over the term program can be considered established.

The evaluation of RQ2 is similarly straightforward from the perspective that if everyone interviewed considers a program must be transformational, then any disagreement with this view is not established. However, if this is not the case, then the notion that experienced practitioners consider a program must be transformational is demonstrated to be false.

4 Data collection and taxonomy of the group of participants

Interviews were conducted between 13 August 2014 and 3 September 2015.

21 people were interviewed from 7 organizations of which 4 were in the private sector (2 separate consultancies, 1 multi-national manufacturing company, and 1 educational institution) 2 from the Government sector (a state government department and a local government department) and 1 which straddles both – a commercialized state government authority. All had offices in Queensland, Australia.

The distribution by industry area was 4 from private industry (1 from each company), 16 from government (7 from state (1 of whom was a contracted consultant) and 9 from local (1 of whom was a contracted consultant)) and 1 was from the hybrid organization (who was also a contracted consultant).

The distribution of work types engaged in was 9 in physical civil infrastructure, 6 in IT, 1 in business development, 1 in manufacturing, 1 in academia/ buildings, and 3 in multiple work types (2 in infrastructure and business development, 1 in physical infrastructure and IT).

The full taxonomy of the interviewed group is given in Table 1 shows the participants (1 to 21), their organization (A to G), industry sector, area within that sector, and their work type or discipline.

Table 1
Participant Taxonomy

#	Org	Sector	Area	Work type
1	A	P	M	I
2	G	P	E	I
3	C	G	LG	BD
4	C	G	LG	IT
5	D	H	SGA&C	IT&I
6	C	G	LG	I
7	C	G	LG	I
8	B	G	SG	I
9	B	G	SG	I
10	C	G	LG	IT
11	B	G	SG	I
12	C	G	LG	I
13	C	G	LG	IT
14	B	G&P	SG&C	IT
15	B	G	SG	I
16	C	G	LG	I
17	C	G&P	LG&C	IT
18	B	G	SG	IT
19	E	P	C	I
20	B	G	SG	I&BD
21	F	P	C	I&BD

Legend:

G=Government	SG=State Government	I=Infrastructure (Civil/ Building /Electrical/ Mechanical)
P=Private	SGA=State Government Authority	IT=Information Technology, including IT infrastructure
H=Hybrid	LG=Local Government	BD=Business Development
	C=Consultant	
	M=Manufacturing	
	E=Education	

In the following sections, participants are referred to by their number and organization e.g. 1A or 21F. The abbreviations in Table 1 legend are also used in places where brevity is advantageous.

Note that full transcripts of interviews have not been included in this paper due to word limit restraints.

5 Findings

The interview question asked was how do you/ does your organization distinguish between a program and a project?

The general findings from the responses to this question are presented below before reporting responses of note under the headings of the issues that emerged.

Participant responses were assessed according to whether they considered a program to be a collection of projects (C), something that produces transformational change (T), or something else (O = Other) or the question was not applicable for whatever reason (N/A). The results of this assessment are as follows:

14 responded C, indicating they defined a program as a collection of projects. Of these:

- 3 were involved in business development, comprising all in the sample who were so involved (3C, 20B, 21F). Two of these were also involved in infrastructure, and the third one, although not directly involved in infrastructure, worked for an organization whose principal activities involved engineering infrastructure (3C).
- 4 were from IT (5D, 14B, 17C, 18B). All three were highly experienced consultants who had worked across a range of industries and just happened to be working on contracts in government at the time of the interview. One (5D) also worked in infrastructure and did not mention transformation.
- 10 worked in engineering infrastructure (6C, 8B, 9B, 11B, 15B, 16C, 19E, + 2 in both I and BD (20B and 21F)). One (5D) said C and O.

This gives a total of 17 responses from 14 participants, three of whom worked across two work types (5D, 20B, 21F).

3 responses were categorized as T, considering transformation an essential part of the definition (7C, 12C, 13C). One of these was from an infrastructure project office and had responsibility for ensuring the organization's internal methodology accommodated IT (14B) and the other two were from IT. These accepted that a programme was transformational but a financial program was a collection of projects which should be called a portfolio. Note: In this respect, all followed the official corporate project office line, one of whom had determined it. So in one sense, all three agreed that a program was a collection of projects but just thought this should be peculiar to financial programs and not to project management programmes.

3 indicated some other understanding categorized as O. 1A said "a program was basically a large project". 5D spoke of a project comprised of three component projects in an environment where the outcome could not be delivered without all three and the term program was generally used to mean a collection of projects. 16C said "The organization treats programs as a list of services rather than a list of projects. The list of projects rolls up to a portfolio. Our budget programs confuse everybody as well. There's not clarity around that".

2 were N/A: one whose organization did not have a definition was not asked and one responded with embarrassment over the organization's distinction between program and programme (10C).

This gives a total of 22 responses from 21 participants, as one indicated both C and O (5D).

In responding to this question, participants spoke about a range of issues. There were several usages or typologies of the word program as well as boundaries and inclusions. To facilitate analysis, the findings of note are presented below according to these issues.

5.1 *Typology 1: Programs as collections of projects*

11B from infrastructure said:

Projects are seen as something that has its own life, it's not just a way of capturing cost ... Our programs are either funding programs or programs with particular purposes across the state ... and we also run geographical programs or delivery programs as well, which is about optimizing the schedule, delivery and having continuous work and so on. At a local level, people talk about program management which is really about getting the work done in a good way, sequenced right, getting efficient procurement, etc. Q: Do you look at programs as being collections of projects? A: Yes. The only projects I look at are the \$10M+ and we do a scan across these every month.

13C from IT said:

The issue came out of the SAP introduction. A program can be a collection of projects and can include maintenance activities that can go on and on if not monitored and you want visibility of these ... Within IT, we look at a collection of projects as ... a program ... We didn't consider this part of transformational change. (Note: This was referring to program rather than programme.)

19E from infrastructure said:

Our clients usually call it one thing or the other (project or program). I don't really think about it or have a personal definition but accept program as a collection of projects that probably have strategic importance outside the delivery of those projects. I'm just delivering and am not concerned with their strategic intent, so to me, it's not really a program. It's just something to deliver for them.

5.2 *Typology 2: Programs and transformation*

7C from infrastructure said, "You generally find a transformational change in the business type projects".

11B from infrastructure, when asked a supplementary question "So you don't go for the IT definition of a program being about transformational change?" responded:

No. Our programs have clear outputs and outcomes and we focus on the outputs. I'm the program owner for a number of programs ... It's different to IT ... Some of our programs have transformational change and others don't. Some of our bigger programs involve a lot of transformational change for the business internally ... It's not essential for a program to have internal transformational change.

13C from IT, while considering a program must be transformational also said:

Unfortunately, we don't use MSP here in IT or the whole of the organization. We focus more on projects. We do have programs with a number of projects under ... Within IT, we look at a collection of projects as business as usual (BAU) without transformation and still call it a program (as distinct from programme) ... We didn't consider this part of transformational change.

17C from IT did not mention that programs had to be transformational, saying:

In IT, we have like work bundled as a program, there's a common objective, they talk about us having portfolios; we have programs of work that are totally disparate. Things like the infrastructure maintenance program is a true program and have network and fiber, storage, software, and infrastructure.

18B from IT said:

A program doesn't have to be transformational; it can be quite mundane. A program can be business as usual ... Ours is transformational as they are all change projects. For a school, primary school is a program and Grade 1 to 6 are projects. The kids are transforming themselves, but the projects and programs aren't.

20B from infrastructure said:

A project is a single thing you are doing. A program would have a series or collection of projects. We have works packages across the state. So it's a program of programs and projects. Q: So the idea of transformational change being a key element of a program is not something you consider important? A: I don't know what you mean.

21F from infrastructure and business development said:

A program does not have to have transformational change. I think that's a step too far. You can get lots of programs that aren't transformational change'. [Interviewer's note: This participant who had successfully managed many major civil infrastructure projects over many years hadn't heard of MSP and asked whom it was written by. He was aware of some OGC materials but hadn't come across the idea of programs being about transformational change].

5.3 Typology 3: Program as a large project

1A from infrastructure said:

We used program and project interchangeably, and a program was basically a large project. They called it program management rather than project management. ... most programs were quite large; averaging \$50 to \$150M and up to \$500M+. These were manpower intensive with small materials components, whereas civil works have much larger materials costs, which puts it into a different perspective. Q Were these equipment projects? A: Yes. Q: Was it an IT focus? A: It was a mechanical and electrical engineering focus.

5D from IT and Infrastructure said:

One project to build a particular element of the network actually had three projects, but everybody just called it the one project, even though there were three buckets of money and all the work had to be allocated three different ways. That wasn't considered a program even though it had three projects for the one effective outcome. Whereas where we have 100 projects within a program, we refer to that as a program. It's a bit nebulous. We tend to do it on network typology, geography, and past experience.

11B in response to another question (2.4 - not reported in this paper) made a comment relevant to this issue:

Some projects are just activities and are run as a large project or small program but that's not really program management. They are really large projects with a lot of

activities rather than small programs. Each one is a commitment that's tracked in timing, but we are not managing each one as a project.

5.4 *Program versus programme*

This was peculiar to organization C.

10C from IT said “Program is budget, Programme is working. Program is a line item of money. Programme is for MSP. This decision was taken to avoid confusion. This decision didn't go down so well”.

12C from infrastructure said:

A programme is around transformational change. I'm talking about programme, not what we talk about in this organization as a budget program. It's about transforming the organization or behavior of the community e.g. ERP, access and inclusion. Not many programs are what we define as true programmes of work. In the project world in the old days, before the OGC came into play, a programme was a programme of works and that is now called a portfolio. We used to talk about a programme of works which was bundling for efficient delivery, it didn't necessarily mean they were inter-dependent. A portfolio is what that's called nowadays, thanks to OGC. A portfolio can consist of sub-portfolios. Program is a financial term and I wish to God they had never ever named it that way, but they have. That leads to confusion. That's a budget program which is basically a funding bucket. We are structured under programs. In a project world that becomes really quite complex. We just keep referring to it as a budget program. It's just a funding allocation, whereas, in itself, it is just a portfolio of work or bundling of things. It's just a bundling of stuff that doesn't necessarily have to be linked or independent. You can use frameworks to enable them to be more efficiently delivered. So what's happening is that people are trying to apply IM(C) (an internal methodology in Organization C) to everything in the bundle, writing business cases and project management plans for all of these things, whereas if we took that as a portfolio, we could actually look at that as a more efficient delivery way. We have only a methodology but you can't apply a project management methodology to managing programs or portfolios. It's not efficient. So that's why we need new frameworks to support those.

13C from IT said “Regarding the program versus programme spelling issue, finance people don't understand how it's spelled in the project management world, but it's not a big issue for us. Sometimes people discount your terminology with their terminology”.

16C from infrastructure said “The organization treats programs as a list of services rather than a list of projects. The list of projects rolls up to a portfolio. Our budget programs confuse everybody as well. There's not clarity around that”.

17C from IT said, “The (program) term is used loosely here; you have programs based on finance, but when we go down to lower levels we can have projects that span multiple (financial) programs”.

5.5 *Program versus portfolio*

7C from infrastructure said:

A collection of projects is a portfolio. We might call it a program, but it's actually a portfolio of projects. The transformational change type projects would be the type of program where ... a group of things that comes together to make a transformational

change in that area. Another example of transformational change was the program to introduce a new ERP system. You generally find a transformational change in the business type projects. We don't have programs of infrastructure projects, we have portfolios of them.

8B from infrastructure in response to a supplementary question “Is the term portfolio management used and what level does that refer to?” said:

Yes. It's used to define the peak body, making decisions on the allocation of funds and strategic direction. There is a gap between portfolio and project. The portfolio level is trying to play the role of program as well. The portfolio is not necessarily the full suite of expenditure of the department – It's just the infrastructure part. We have separate portfolios e.g. finance and other organizational activities. The portfolio view should really be considered holistically looking across the whole of the department. The programs should be considered as a collective, not individual streams or silos.

15B from infrastructure said:

By our definition, the program managers are in the investment area. In reality, there's a gap in between. It's probably blasphemy to say they don't do program management but they are focused on \$s and cash flows, not on what I'd call delivery program management. That's the gap my boss is trying to fill. If I got to choose the names, I'd call the investment area portfolio management, what we do program and what the districts do projects. We want to get into the sequencing of projects for reasons other than cash flow, including the bulking up of projects, but it's not being driven from the delivery end. The project we are clear on. With the program, we've painted ourselves into a corner by saying that what the investment area does is program management.

16C from infrastructure said “The organizations treat programs as a list of services rather than a list of projects. The list of projects rolls up to a portfolio. Our budget programs confuse everybody as well. There's not clarity around that”.

17C from IT said:

The model I'm most familiar with is the one promoted by MSP which I think is a good model, because that actually goes up to the next level (portfolio). A portfolio by definition also includes BAU... Q: When managing a program do you switch over to a different methodology? A: Not necessarily, but PRINCE2 won't work. I used MSP and I'm operating at a higher level and looking at portfolio type risks and can come back in and look at program risks and inter-relationships between individual projects, resourcing impacts as well.

18B from IT said, “A portfolio is a collective of programs”.

19E from infrastructure said:

Our clients usually call it one thing or the other. I don't really think about it or have a personal definition, but accept program as a collection of projects that probably have strategic importance outside the delivery of those projects. I'm just delivering and am not concerned with their strategic intent, so to me, it's not really a program. It's just something to deliver for them.

5.6 Objectives, benefits and outcomes

3C (BD) said:

(A program) can be an aggregation of a series of activities that have some common thread and theme. Each can deliver a set of program outcomes. Scope, time and task differentiate. Few projects have objectives that last to 2026 (now is 2015). While programmatic work can happen in a project, I don't connect these e.g. earthworks program part of a road project. Program can be used above or below projects. Our programs are all-encompassing, some with woolly outcomes. We have to conclude with an evaluation. Projects have a very defined outcome. Programs often don't.

8B from infrastructure said:

On a program outcome level typically benefits are not understood well enough and get translated down to the project level to manage and measure when the project can't do that as the ultimate outcome or gain might rely on a suite of projects that are sequentially delivered. Delivery programs are being told you must measure benefits and investment programs are as well and no-one really knows who's doing it and which things are important at that time. Benefits and program are strongly associated. At the investment program level, the benefits determine how the projects are prioritized. Once delivered, the benefits may need to be adjusted and this is a continuous cycle, which needs to be done at a project delivery level.

9B from infrastructure said "Program = a collective of projects of a similar nature or a collective of projects with common benefit outcomes".

17C from IT said "A true program is one where all the projects have a common objective ... I look at the objectives and benefits".

18B from IT said "Programs have objectives and projects support that. It can be a high-level vision or objective. The program is the project enabler".

19E from infrastructure said, "I don't really think about it or have a personal definition, but accept program as a collection of projects that probably have strategic importance outside the delivery of those projects".

21F (I&BD) said:

There are two common uses, either program = lots of projects or it is focused on business objectives. For me it links projects with the business. A program delivers some business benefits. If they don't, you need to look at your program. I've found a number of times I've had to re-scope a program simply because it is just a collection of projects with no synergy. In that case, I think the program is poorly scoped. Sometimes a program has no synergy.

6 Analysis of findings

The issues raised in the findings are analyzed below.

6.1 Collection of projects versus transformation

Most participants agreed that a program was a collection of projects and that it did not have to be transformational. Three participants said the transformation was essential to the definition of a program (provided it is spelled programme) and 14 said or implied it was not,

with some of those explicitly rejecting the notion. Those saying transformation was required were all in or involved with IT and all acknowledged programs as a collection of projects while saying programmes did have to be transformational. All were from one organization (C) which had defined these two terms differently. However, several from IT in two different organizations also did not consider that programs or programmes had to be transformational with one (7C) noting “You generally find a transformational change in the business type projects”. Another (18B) gave the example of primary school is a program and Grades 1 to 6 projects, saying “The kids are transforming themselves, but the projects and programs aren’t”. Another said: “it’s not essential for a program to have internal transformational change”. The responses of two other highly experienced and successful infrastructure program directors managing multi-billion-dollar annual programs (20B and 21F) made it evident that the concept of internal transformational change had been completely unnecessary for their practice. These participants were both well aware of the external community transformations that can result from infrastructure projects.

Given that substantial non-acceptance of this concept was found and the reasons for it were well-articulated in the interview responses, it cannot be considered as either generic or best practice and so the proposition that a program must be transformational for the organization delivering it must be considered disproven i.e. false. This indicates that the answer to RQ2 is negative as most of the experienced project managers interviewed did not consider that a program must involve transformational organizational change.

This also raises the question of the influence of IT terminology on project management generally.

6.2 *A program as a large project*

The issue of a big project being considered as a program was mentioned by 1A and 5D in relation to mechanical/ electrical projects. The issue was not raised specifically in relation to IT projects although it was implied by some participants from organization C in classifying a collection of projects as a portfolio rather than a programme. 11B mentioned the opposite perspective, saying that even a program of projects may be managed as a large project.

This issue is important if projects are to be managed using a different methodology for programs. It is evident that organizations A and E did not distinguish between projects and programs, managing both successfully with the same internal system. 19E said some clients ask for a program manager and others ask for a senior project manager but the roles are the same; “To me, it’s not really a program. It’s just something to deliver for them”. Organization B also had in place a system that indicated how programs and portfolios could both be managed by selecting particular elements of their project management system. Project Management Institute (2003) also took this approach, with OPM3 having program and portfolio methodology based upon the PMBOK project processes.

Organization B’s internal methodology also differentiated between projects, component projects, and sub-projects. The distinction was that component projects are projects that are inter-dependent and without which the overall project cannot produce an outcome, whereas sub-projects are arbitrary subdivisions that can be delivered independently and still produce a useable product that produces an outcome. This terminology had been applied to business development/ IT projects as well as linear engineering infrastructure replacement/ upgrade projects where the length delivered depended on the funds available. In this Organization (B), an ‘overall’ project that depended on component projects was managed as a project, not as a program. This is a potentially useful categorization and so we will define these terms as:

Sub-project = part of a larger project that can independently produce a required outcome

Component project = part of a larger project that cannot independently produce a required outcome

Application of this nomenclature would accommodate participant 5D's difficulty with three projects being referred to as one project, as the three would be labeled component projects. It would also avoid the need to use the term program for a big project.

6.3 *Program versus programme*

The spelling of the word emerged as an issue in only one of the seven organizations represented in the interviews. Three participants from this organization (C) were clear about the different meanings of the two spellings but the remainder either were not or did not mention the issue. Two attributed it to MSP/ OGC. 10C said "This decision (to have two different meanings for different spellings) was taken to avoid confusion. This decision didn't go down so well". 13C said "Regarding the program versus programme spelling issue, finance people don't understand how it's spelled in the project management world, but it's not a big issue for us. Sometimes people discount your terminology with their terminology".

The responses indicate that assigning different meanings to two different nationality spellings of the same word was an attempt to resolve a terminology issue between accounting and delivery interests using IT-based terminology i.e. between three competing commercial interests or perspectives. The conflict between organizational accounting control and project control was also mentioned by 15B, indicating that program terminology and definition has caused difficulty in more than one organization. This indicates that RQ1 can be answered affirmatively; confusion does still exist within the experienced practitioner community about the meaning of the term program.

For organization C, this attempt led to confusion of program with portfolio, with the latter being defined as a collection of projects. This overlapped with the more widely accepted meaning of the word program in attempting to isolate the word program to budgeting and accounting and did not accommodate the computer program usage of the term.

As noted in the Appendix, the word program was initially the American (mis) spelling of the English word programme. In the 1970s in Australia, a computer program was distinguished from other programmes by its spelling. However, by the 1990s the ease and simplicity of the shorter form in Australia had made 'program' an acceptable (albeit still not preferred) spelling for all forms of 'programme'. Rayner and Reiss (2013, p. 2) also noted "The English speaking nations cannot even agree on how to spell program(me). We will use *programme* ..., but you should remember that people more aligned with the USA will use the term *program*".

6.4 *Program versus portfolio*

The findings indicate general practitioner agreement with the PMI definition of portfolio as a group of programs, projects, and other things, albeit with organization C at times adopting a more restricted view that overlaps with the PMI definition of program as a group of projects. There was also a general acceptance that the organizational portfolio level sits above the organizational program level.

Interestingly, 15B indicated a reluctance for an investment area to actually label itself as a portfolio, preferring to refer to and regard themselves as doing program management. This area actually sets the criteria for various projects to be included within its various programs.

6.5 Program and benefits association

Four participants connected programs with benefits (8B, 9B, 17C, 21F). Others used the terms objectives and outcomes (3C, 18B). One (17C) used both benefits and objectives. This aligns with PMI and APM and is also mentioned in the MSP definition of programme.

3C noted “projects have very defined outcomes. Programs often don’t” and “Programmatic work can happen in a project ... program can be used above and below projects”. This highlights the need to distinguish between the activities performed in program(me) management, to identify the silent or assumed qualifiers that may be present and to determine where and how it is assigned as a label.

The comments of 8B were particularly instructive regarding what is possible at the project level:

On a program outcome level typically benefits are not understood well enough and get translated down to the project level to manage and measure when the project can’t do that as the ultimate outcome or gain might rely on a suite of projects that are sequentially delivered.

This is effectively saying that benefits realization is not a project activity, as noted by McGrath (2007) in saying “Project managers cannot be held responsible for actually realizing the benefits from a project, as the delivery team will generally move on when the project is finished”. It may also not be possible for even the program level to assess benefits realization if, for example, the benefits don’t materialize until the last project in the program is completed. This implies that only the organization that owns and operates the new assets can realize the benefit. That organization (or part of it) will derive program and other benefits enabling achievement of its business (portfolio) objectives. This generally results from the completed asset being put into operation. This is not exactly confirming that benefits must be associated only with the program level; it means the realization of benefits usually cannot occur at lower than the program level.

7 Discussion

The findings indicated there were three different typologies of definitions and three other issues causing confusion. The analysis of these concluded that the boundaries described with the project and portfolio levels were fuzzy. This clearly indicates that the answer to RQ1 is affirmative; confusion has been found to exist in the experienced practitioner community regarding the meaning of the term program. Furthermore, this confusion existed to the point where one organization had (unsuccessfully) attempted to attribute different meanings to different nationality spellings of the word in an attempt to resolve competition for exclusive use of the term.

The confusion identified around transformation indicated a negative answer to RQ2. Not only was there an absence of unanimity that a program must be transformational, but there was also only a small pocket of support for that among the IT practitioners interviewed.

Analysis of the responses to this single interview question has revealed how terminology mistakes can so very easily occur and be very difficult to detect. This can result from failing to recognize the boundaries and limitations of the source field, being loose with a silent or assumed qualifier and being loose or ‘upwardly mobile’ in attaching conceptual labels to various activities and organizational levels. Any of these can produce competitive rather than agreed use of terminology, resulting in confusion. When all of them occur together, the problem becomes quite resistant to resolution.

This points to a need to properly define the terms project, program and portfolios together with their organizational and management qualifiers and to adequately investigate whether particular processes are truly generic before mandating them to general practice.

8 Limitations and future research

The limitation of this work is that it is based upon a sample of organizations and industries in one state in one country. While the factors mentioned above in sample selection should result in world-wide trends affecting any local participants, there is no guarantee of that. RQ1 and RQ2 were framed in a deductive way, not an inductive way, to allow for this; however, there may be other perspectives the study did not identify.

The responses indicate a need for a rigorous exercise to determine suitable terminology for the program term and its boundaries with project and portfolio.

During this study, data was also collected on project governance and the exercise of power, which will require further separate analysis.

9 Conclusion

This paper has documented the collection and analysis of interview data from experienced practitioners and found that confusion that exists in their understanding of the meaning of the word program. It also found that the notion that a program must be transformational is not generally accepted among practitioners. In some cases, in engineering infrastructure, it was unheard of and it was not even accepted by all IT project practitioners interviewed. It also found that activities thought to be generic within IT projects have been problematic when transferred to other fields. This indicates a need to agree and adopt an internally consistent set of definitions of project, program, and portfolio across the whole project management field. Such a set of definitions has recently been proposed by McGrath and Whitty (2019).

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