

Commented CPD examples

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Abstract

Adding value to concise process diagrams (CPD) through brief commented practical examples.

1 Introduction

Concise process diagrams (CPD) — a type of non-causal directed ‘node–edge’ diagrams — represent processes as ‘state–action’ sequences (Perdicóúlis, 2010, pp.67–70). CPDs are designed to represent the most relevant information regarding processes in an impartial view, and are open to custom adaptations and application enhancements (Perdicóúlis, 2011). Two commented examples of CPD practice provide ideas to new users.

2 Expression of variables

Let us take a global view of the educational process, stating that ‘schools educate students’. For many people, such a statement would be ‘naturally’ transcribed as a concept map — Figure 1.



FIGURE 1 ‘Schools educate students’ (concept map)

To create an equivalent CPD, some modifications are necessary (Perdicóúlis, 2011). For instance, ‘students’ must be presented as an ‘identifiable state’ (Perdicóúlis, 2010, p.68), which in this case would be ‘educated students’. The equivalent action verb would be somewhat more ‘mechanical’ — Figure 2.

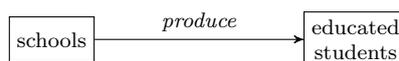


FIGURE 2 ‘Prepared schools produce educated students’ (CPD)

The names of the variables (e.g. students) are best expressed as representing ‘value’ (e.g. educated) rather than ‘disvalue’ (e.g. un-educated). In the same way as in algebra, multiplying both sides of an equation by -1 would not produce a false statement (equation), but we tend to work in the ‘positive space’. This helps to enhance comprehension — which in ‘negative talk’ would be to ‘decrease confusion’ (Sterman, 2000, p.153).

3 Tracks, direction, and sequence numbering

Let us consider an example of a private investment project intended to increase the efficiency of documents subject to a public review operation — Figure 3. The direction of investment is from left to right, while the direction of returns (money flows) is from right to left. As the diagram is not quantitative, it is not possible to ascertain the amount of returns, but the qualitative examination suggests viability of the project.

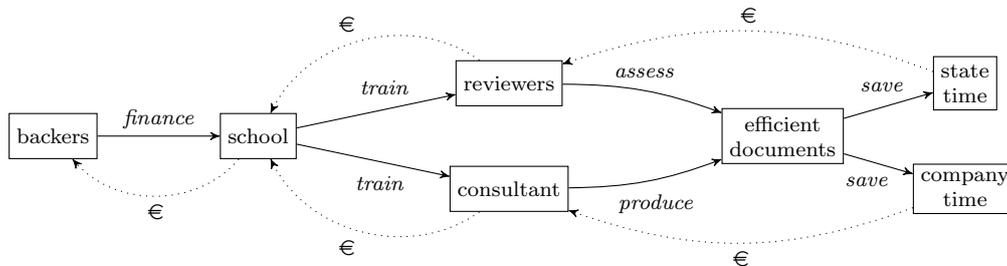


FIGURE 3 Promoting the education of professionals towards (more) efficient documents could be a profitable investment for many — global view of the argument (CPD)

Money flows, together with the distinct functions and time savings of the two acting entities (consultants and reviewers), mark two separate ‘tracks’ (private and public, in the inferior and superior pathways, respectively) which indicate two different perspectives. The existence of two tracks makes the numbering of the sequence of the tasks indispensable — Figure 4.

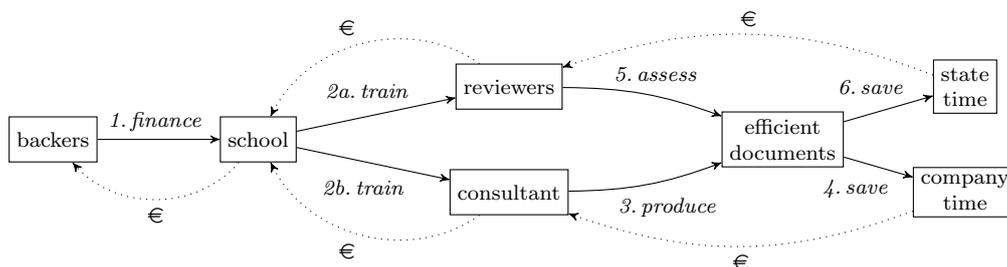


FIGURE 4 Introducing a sense of sequence in the process: tasks are numbered in the order of execution

4 Discussion

Concise process diagrams can be enriched as deemed necessary per application, as illustrated. In addition, CPDs can be complemented — or even substituted — by other types of diagrams: either procedural (e.g. concept maps) or causal, such as descriptive causal diagrams (Perdicoulis, 2010, pp.70–74), depending on what must be understood and/ or communicated.

The particular *impartial* character of CPDs is likely to make entities participating in processes wish for ‘entity–action’ diagrams that show ‘who does what to whom’, and/ or ‘entity–dependency’ diagrams that show ‘who depends on whom’, such as organisational charts (or ‘organigrams’) — Table 1.

DIAGRAM	REPRESENTATION	RELATIONSHIP	EXAMPLE
state–action	concise process diagram (CPD)	dynamic	‘produces’
entity–relationship ^a	concept map	static/ dynamic	‘is’/ ‘defends’
entity–action	concept map ^b	dynamic	‘does’, ‘produces’
entity–dependency	organisational chart	static (structural/ organisational)	‘depends on’, ‘reports to’

^aGeneric

^bPartially satisfactory use

TABLE 1 Some types of non-causal ‘node–edge’ diagrams relating to process

Confronted with many modelling instruments, it is important to keep in mind what is most important: efficient communication and understanding. This requires a wise (and probably ‘lean’) selection of the most appropriate instruments for each application case.

5 Conclusion

The ‘state–action’ process sequences represented by CPDs can be complemented by other diagrams, and also be adapted to specific practice needs with the help of additional markings (e.g. sequence numbering) and organisational divisions (e.g. entity tracks).

References

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