State-of-the-art object-oriented metrics and its reusability: a decade review

The authors present a list of factors which they consider influence the reusability of a piece of object-oriented software. They, correctly state that the importance of the concept of reusability is not new but argue the object-oriented programming paradigm reveal new types of metrics.

Pardy et al identify that without reusability, the concept of the software development lifecycle will fail. The questions posed centre around determining the reusability factors of the component in a piece of object-oriented software. They consider the following factors:

1.Used in the data project (UD)

2.Modules in the program (MIP)

3. Architecture driven approach (ADP)

4.Analgorithm used in the program (AP)

5.Design patterns (DP)

6.Documentation in project (DIP)

7.Knowledgerequirement (KR)

8.Models in the project (MP)

9.Requirement analysis (RA)

10.Service contracts (SC)

11.Testcases/test design(TCTD)

The authors identify frequency of study within the literature review but confuse popularity with validity which limits the impacts of their findings. Furthermore, the purpose of their study is confusing the re-usability and the lifespan of the software with quality. In fact they state that their future goal is to, ‘reduce the maintenance cost and staffing save time.’ (Padhy et al, 2018, p436). This may be at odds with the service contracts (SC). Without the users there would be no software development and the authors are mainly concerned with efficiency and costs rather than quality.

References

Padhy, Neelamadhab, Suresh Satapathy, and R. P. Singh. "State-of-the-art object-oriented metrics and its reusability: a decade review." In Smart Computing and Informatics: Proceedings of the First International Conference on SCI 2016, Volume 1, pp. 431-441. Springer Singapore, 2018.