
Agile practices versus Waterfall approach

Introduction

The objective of this assignment is to understand the dynamics of software development projects employing the agile approach.

Large-scale software engineering organizations have traditionally used plan-driven, heavyweight, waterfall-style approaches for the planning, execution, and monitoring of software development efforts. This approach often results in relatively long development schedules that are susceptible to failure, especially in a rapidly changing environment: Schedule pressure, defects, and requirements changes can drive endless redesign, delay the project, and incur extra cost. Many in the commercial software world have dealt with these pressures by adopting Agile Software Development, an approach designed to be flexible and responsive to high-change environments.

Outline

Software development teams that are said to employ “Agile development” in effect practice a variety of “agile methods”. These practices are advertised to reduce coordination costs, to focus teams, and to produce stable product iterations that can be released incrementally. Agile software development has become a de-facto approach to the engineering of software systems in the commercial world and is now entering the aerospace and defence sectors. Write a report documenting the following:

1. A brief explanation of any four software development methodologies based on iterative development.
2. Comparison of agile practices and waterfall approach in terms of:
 - a. Project planning
 - b. Project execution
 - c. Project closing
3. Recommendations for how to integrate agile practices into a large-scale software engineering organization.

Mark Allocation

Criteria	Weight
Content	45
Abstract	5
Iterative Development Methodologies	15
Comparison	15
Recommendation	5
References	5
Formatting	5
Report Formatting	5
Total	50

Additional Information

- This is an individual assignment. All work must be done on your own.
- Submit your assignment electronically on Teams before the due date.
- All writing must be correctly referenced and cited. *See the guidelines on the next page.*
- Belgium Campus makes use of software that can **scan for plagiarism** and a student caught doing this will get 0 for this assignment.
- No mark will be awarded if the assignment is not uploaded via Teams Assignments.
- Late assignments will not be accepted and missing the deadline is an automatic 0.

ACADEMIC STYLE OF WRITING

An academic style of writing has the following characteristics:

- Formal
 - avoid using contractions such as isn't or can't;
 - no slang or colloquial terms;
 - formal phrasing e.g.
 - There are a lot of schools that don't have electricity.
 - Many schools are without electricity.
- Do not use first person
 - I looked at the different systems
 - Different systems were investigated
- Everything you state must be supported with evidence through referencing and citations. Objectivity must be maintained.
 - If you are stating your opinion, you must be able to support it logically.
- Paraphrasing is not merely retyping something in your own words. It is a restatement of the original **idea**. You need to show that you understand the core meaning of the original text.
- Use either Calibri or Times New Roman, font size 11, with a line spacing of 1.5, black text on a white background, justified alignment. All headings are size 16.
- Ensure you have a cover page with the assignment title, subject, lecturer details, date, and your own details; a professional appearance is important.
- Cover page, table of contents, body, and a reference list are required.
- Depending on the assignment you can also have a list of figures, a glossary, a list of abbreviations, a list of tables, and appendices.

REFERENCING AND CITATION GUIDE

Referencing and citations are how we prove and support our statements. They are absolutely crucial, vital, critical, imperative, fundamental, and essential!

REFERENCING

There are many different styles of referencing. These styles depend on your educational institution and on the field you are in. At Belgium Campus, we use Harvard referencing which is an author-date type of referencing.

Important notes:

- The most important information is the author, the date, and the title of the article
- If your source does not have an author and is instead published by an institution e.g. the Massachusetts Institute of Technology, use the corporate author feature in Word.
- Use the tools provided by Microsoft Word. You can find a guide [here](#).
- The reference list is automatically populated using MS Word's tools. It is alphabetical and not numbered. It has its own page at the end of your document.
- If you are using an image, diagram, table, or figure, the source also needs to be referenced and you need to add a citation. You can use Microsoft Word's caption tool for this.
- If you are creating a PowerPoint presentation, referencing and citations still apply.

Here is an example of a reference list:

References

- Aarons, D. and P. Akach. 1998. South African Sign Language-one language or many? A sociolinguistic question. *Stellenbosch Papers in Linguistics* 31: 1-28.
- Al-Fityani, K. and C. Padden. 2008. A lexical comparison of sign languages in the Arab world. In R.M. de Quadros (ed.). *Sign Languages: Spinning and unraveling the past, present and future. TISLR9, forty-five papers and three posters from the 9th Theoretical Issues in Sign Language Research Conference, Florianopolis, Brazil, December 2006*, 2-13. Petropolis, Brazil: Editora Arara Azul.
- Baker, A., B. van den Bogaerde, R. Pfau and T. Schermer (eds.). 2016. *The linguistics of sign languages: An introduction*. John Benjamins Publishing Company.
- Clark, B. 2017. Sign Language Varieties in Lima, Peru. *Sign Language Studies* 17(2): 222-264.
- Crowley, T. and C. Bower. 2010. *An introduction to historical linguistics*. Oxford University Press.

CITATIONS

If the information we are typing is not general knowledge within the field or is not our own work we need to state where this information came from. We do this through a citation. A citation is a link to one of the references on our list.

For example:

Here I paraphrase what I found on the internet:

Despite several experiments, there does appear to be a consistent link between the ZPD and acrimony.

This is not my own information. In my reference list is the reference to the source:

Vygotsky, L., 1978. *Mind in Society*. London: Harvard University Press.

This means I *need to use a citation*. It is simple to insert a citation from my sources using the MS Word tools. The paraphrase with my citation is:

Despite several experiments, there does appear to be a consistent link between the ZPD and acrimony (Vygotsky, 1978).

I can also directly refer to the author. For example,

Vygotsky (1978) pioneered the research in pedagogy and didactics through the Zone of Proximal Development theory.

Here my citation only has the year since I already stated the author. This is also made straightforward with the MS Word tools.

If I am using specific information from a book or article, I need to include the page numbers. I can't expect my reader to search through a book for a piece of information. You can do this using the MS Word tools. For example:

Within the field of robotically assisted surgery, Davis (2018, p. 204-207) found that patient trust in the doctor was the deciding factor.