**BASIC WORKBOOK**

Tasks for: DLBCSIAW01 – Introduction to Academic Work

**Workbook Task 1: Theory of Science**

1. Choose an article from an academic journal from your own or any other discipline that is interesting to you. Preferably use the Online Library via the Library and Information Services (LIS) to search for an article. Reference this article according to the rules from the course book/general citation guidelines.
2. Summarize the following points, that is, you should paraphrase the text according to the citation rules from the course book/general citation guidelines:
   1. the problem/background/rationale of the article,
   2. the research question(s)/objectives, and
   3. the main results and conclusions of the article.
3. Determine the research methodology from the article and give three arguments why it is a qualitative or quantitative research methodology or, for example, a literature review. You can include statements about the sample, the method of data collection and analysis, or how representative the results are.

Maximum length: two pages

Start on the next page.

**1)**

Wafa, R., Khan, M. Q., Malik, F., Abdusalomov, A. B., Cho, Y. I., & Odarchenko, R. (2022). The Impact of Agile Methodology on Project Success, with a Moderating Role of Person’s Job Fit in the IT Industry of Pakistan. *Applied Sciences (2076-3417)*, *12*(21), 10698. <https://doi.org/10.3390/app122110698>

**2)**

**a) the problem/background/rationale of the article**

Wafa et al. (2022) focused on how in today’s digital age, the practice of upgrading and adopting new technology systems and software is a key requirement to meet the needs of the rapidly changing consumer demands. There is a high stake in software developers competing with the public’s ever-changing desires by efficiently and effectively creating functional and unique products that fulfill these requirements. This article argues that agile software development together with a person’s job fit can be a powerful tool to enable the development of necessary and popular products in a fast manner (pp. 1-2).

**b) the research question(s)/objectives**

Wafa et al. (2022) formulated 2 hypotheses for this research. The first hypothesis concentrated on how effective the agile methodology can be for the project’s success. The second hypothesis emphasized the importance of Job Fit, which would have a better impact on the agile approach, leading to favorable outcomes (p. 13).

**c) the main results and conclusions of the article**

Wafa et al. (2022) looked at the impact that Agile Methodology has on a project’s success and development, in the software sector of Pakistan. The results of the surveys conducted in around 350 IT organizations, of which 276 were thoroughly analyzed, confirmed that Agile methodologies and a person’s job fit are essential for the efficient execution of software projects. The scope of this work could be expanded in the future to include research on the internal dynamics of agile teams (pp. 13-14).

**3) Methodology:**

To understand the origins, age, job experience, gender distribution, and job role of the organizations and IT industries in Pakistan, and also get an insight into what they thought of Agile Software Development, Wafa et al. (2022) performed various surveys and questionnaires on 350 IT companies selected through simple random sampling. Among the received responses, only 276 were selected for this study, because of being precise and containing useful information (pp. 5-13).

**This is a Quantitative Research Methodology.**

1. In quantitative research, surveys are one of the most used tools to gather information about the views and thoughts of the participants, leading to a numerical result (statistical significance). Here, the background of the participants was first defined, and then an analytical method was used to understand their point of view regarding the Agile Approaches.
2. The questionnaires were analyzed using a five-point ordinal scale to acquire statistical data. This study targeted IT professionals in the different software houses in Pakistan.
3. To make sure that a measurement doesn’t encounter any random error, the reliability test is carried out using a scale. In this case, the results showed that the internal consistency of a project’s success and Agile methodology is reliable, whereas for a person’s job-fit is unreliable.

**Workbook Task 2: Bibliography and Citation**

1. Have a look at the bibliography of the article you selected in Task 1 and list three different types of sources (e.g., monograph, chapter in edited book, journal article, online source, etc.). Assign the three selected sources to the different source types. Make sure to use the citation rules from the course book/general citation guidelines.
2. Choose two paragraphs from the article you selected in Task 1 and write a paraphrased text for each of the two paragraphs according to the citation rules from the course book/general citation guidelines.

Maximum length: one page

Start on the next page.

**Bibliography and Citation**

**1) 3 References**

1. **Journal article:** Al-Zewairi, M., Biltawi, M., Etaiwi, W., & Shaout, A. (2017). Agile software development methodologies: Survey of surveys. *Journal of Computer and Communications*, *5*(05), 74. <https://doi.org/10.4236/jcc.2017.55007>
2. **White paper:** Inflectra. (2022). *Introduction to Agile Software Development Methods.* [White paper]. <https://www.inflectra.com/Ideas/Whitepaper/Introduction%20to%20Agile%20Development%20Methods.aspx>
3. **Conference proceedings:** Bannerman, P. L. (2008). Defining project success: a multilevel framework. Paper presented at PMI® Research Conference: Defining the Future of Project Management, Warsaw, Poland. Newtown Square, PA: Project Management Institute. <https://www.pmi.org/learning/library/defining-project-success-multilevel-framework-7096>

**2) Paraphrasing**

**Original text 1:**

Person-job fitness is calculated by the consistency of the person with his/her role, function, or mission in the project. Research shows that there is still a gap where development analysis and actual work should be based on the concept of using the pace of development and the factor conditions associated with the success of the project. While examining and compiling the data, it was suggested that the organizational culture and dynamism of the project team are key to the success of the project.

**Paraphrase 1:**

**Original text 2:**

The world has suffered a lot financially at the hands of economic slowdowns, recessions, and because of the recent and ongoing COVID-19 pandemic. Like other industries, the IT industry has also felt its effects. IT companies have been forced to lay off employees and minimize costs through remote and off-campus operations. These changes in the way the IT companies operate, directly affects the quality of the software product. In this section, we provide an overview of different studies on Agile Adoption from the early times of Agile to contemporary times. All of these studies report different figures for Agile adoption worldwide. However, one thing that is commonly reported in these studies is that Agile adoption is increasing at a healthy rate and not just in software development but also in business development and management.

**Paraphrase 2:**

**Workbook Task 3: Practical Application of Good Science I: Finding a Topic and Database Search**

1. Think about a research topic in your field of study, e.g., for a research essay or thesis. The topic should be interesting to you and you should be able to find relevant scientific literature on this topic. You are free to choose a topic. There is no need to get your tutor’s approval. Formulate a suitable title for your research paper.
2. Search for relevant literature on your topic.
   1. Formulate five search terms that fit your topic and conduct a database search preferably in the Online Library via the Library and Information Services (LIS). Use Boolean operators at least once. List the search terms in a table.
   2. List five scientific sources that you found with the help of your database search. Create the bibliography according to the rules in the course book/citation guidelines.

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Start here:

1. How to Improve User Experience through Software design?
2. Research Terms and Use of Boolean Operators

| Software Design | concentrates on the total experience that consumers get with a piece of software |
| --- | --- |
| Usability of Software | relates to the software design process. |
| User Experience | It describes a software product's usability and efficiency |
| User Centric Design | .emphasizes creating software that takes customer demands and preferences into account |
| Design of Interface | discusses the graphical user interface (GUI) design |

**Boolean Operators:**

Software Design OR Interface Design; User Experience AND Usability of Software

3)Scientific Resources and bibliography

Guntupalli, R. C. C. (2008). User interface design: methods and qualities of a good user interface design. *University West*.

The different techniques and characteristics of successful user interface design are covered by Guntupalli (2008). The author discusses several methods and strategies used in user interface design and highlights the significance of producing interfaces that are simple, effective, and user-friendly.This source offers insightful information about user interface design approaches and the characteristics that make for a positive user experience. It provides a solid basis for comprehending the ideas and methods that may be used to boost user happiness and improve software design.

Thiayagarajan, R. (2016). User Experience in Software Engineering. *Sweden, Gothenburg: Chalmers University of Technology*.

Hiayagarajan (2016) focuses on software engineering with regard to user experience. The author emphasizes the significance of taking user demands, preferences, and satisfaction into account during the design and development phases as well as the role that user experience plays in the software development process.This source sheds light on how user experience plays a part in software engineering and emphasizes the value of applying user-centered design concepts. It advances knowledge of how software design may be improved to satisfy user demands and improve the overall user experience.

Abdelaziz, T. M., Maatuk, A. M., & Rajab, F. (2016). An approach to improve the usability in software products. *International Journal of Software Engineering & Applications (IJSEA)*, *7*(2), 11-18.

Abdelaziz et al. (2016) outline a strategy for enhancing software product usability. The authors provide a paradigm that aims to improve the user experience by identifying and fixing usability problems throughout the software development lifecycle.The following information provides a useful foundation for enhancing software product usability. It gives academics and practitioners who want to improve user design and make more user-friendly software applications a systematic way to find and fix usability concerns.

Carvajal, L., Moreno, A. M., Sanchez-Segura, M. I., & Seffah, A. (2013). Usability through software design. *IEEE Transactions on Software Engineering*, *39*(11), 1582-1596.

In their 2013 study, Carvajal et al. examine the idea of usability in software design. The authors suggest a paradigm for usability-focused software design and stress the significance of including usability issues in the software design process.The source emphasizes how important it is to take usability into account while developing software. It gives a framework that helps direct academics and practitioners in developing software that is intuitive, effective, and user-friendly. It also offers insights into how usability can be included into the software design process.

Jolak, R. (2017). Understanding software design for creating better design environments.*Chalmers University of Technology*.

For the purpose of developing better design environments, Jolak (2017) focuses on understanding software design. The author examines the variables that affect software design and highlights the need for thorough comprehension and efficient design techniques. The reference aids in comprehending software design concepts and the elements that influence the creation of new software. It gives advice on how to set up settings that support efficient software design, and it may help academics come up with methods and strategies for enhancing user design in software development.

**Workbook Task 4: Practical Application of Good Science II: Introduction and Research Questions**

Write an introduction for your research paper from Task 3. Remember to include all elements of an introduction and to formulate at least two research questions.

In the introduction, cite at least one source directly and paraphrase two more sources. Make sure to use the citation rules from the course book/general citation guidelines. Feel free to use sources you have already listed in Task 3.

Maximum length: one page

Start on the next page.

Start here:

Introduction:

User experience has grown in importance as a component of software design in the current digital era. The success of software products depends on the consumers' enjoyment and involvement as well as their usefulness as technology continues to advance. Effective software design has become a key area of attention for designers, developers, and companies in order to improve user experience. Software designers may build engaging and intuitive interfaces that enable smooth interactions and eventually increase user satisfaction by giving priority to user demands, preferences, and usability. The paper examines the value of the user experience in software design and identifies important guidelines and tactics to improve the user experience as a whole.

Research Questions:

1. How does the entire user experience in software design change when user-centric principles of design are applied?
2. What are the main elements that enhance the user experience in software design, and how may they be successfully applied?

Paraphrasing 1:

Software design, which involves the study of requirements and the construction of a blueprint for the system's internal structure, is a crucial step in the development of software. It serves as a basis for the building stage and contributes to the software's effective implementation. It is astonishing, nevertheless, how frequently current software design environments fall short of providing software designers with all they actually need. These settings frequently lack knowledge of the actual difficulties faced by designers and are unable to offer workable solutions. This emphasizes how crucial it is to cater to the practical requirements of software designers in order to strengthen the process of software design as a whole and, eventually, the quality of software products. (Jolak, 2017)

Paraphrasing 2:

Usability, which gauges how simply and effectively users can interact with the program, is directly related to the quality of the user experience in software products (Abdelaziz et al., 2016). Software success depends on usability since consumers tend to give up on items that are challenging to use or don't satisfy their needs. Users are frustrated and leave websites that don't clearly communicate their products or have difficult navigation. Users seldom ever take the time to read manuals or try to understand complicated interfaces. When faced with difficulties, consumers choose to quit because there are many options. Usability must thus be prioritized in software and website design in order to keep users and guarantee a great user experience.

**Workbook Task 5: Research Methods**

1. Determine an appropriate research methodology for your research paper from Task 3 and describe the appropriate methods of data collection and analysis. You only need to explain the method of data collection and analysis. Designing a questionnaire or any other instrument is not necessary.
2. Justify why the chosen research methodology is appropriate to answer your research question(s).

Maximum length: one page

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Start here:

Rich and thorough information will be gathered using a mixed-method approach. The qualitative method of content analysis will be employed where the existing data available on the topic will be analyzed and the data will be collected. The quantitative method of questionnaires will be used to take the point of view of various people and companies and software users on their experience.

For the study's topic under consideration, a mixed methods approach to data collecting is useful for a number of reasons. First of all, Agile approaches cover both subjective experiences and objective measures, necessitating thorough knowledge of the subject. Quantitative information on the user experience and usability of various software as well as qualitative information about people's perspectives by combining both types of data collection techniques. This enables a more thorough analysis of the benefits and drawbacks. Second, using mixed techniques makes it easier to triangulate data, allowing researchers to confirm findings and strengthen the validity of their study. Researchers can find convergent trends and offer a more reliable interpretation of the data by comparing and contrasting information from several sources.

**Workbook Task 6: Create Indexes**

1. Create an outline for your research paper from Task 3. Take into account the structure of scientific papers and the chapters that are mandatory.
2. Create a bibliography for all sources cited in your workbook, i.e., all sources you quoted directly or paraphrased in Tasks 1-5, according to the rules in the course book/general citation guidelines.

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Start here:

**Outline**:

Introduction

User experience has grown in importance as a component of software design in the current digital era. The success of software products depends on the consumers' enjoyment and involvement as well as their usefulness as technology continues to advance. Effective software design has become a key area of attention for designers, developers, and companies in order to improve user experience. Software designers may build engaging and intuitive interfaces that enable smooth interactions and eventually increase user satisfaction by giving priority to user demands, preferences, and usability. The paper examines the value of the user experience in software design and identifies important guidelines and tactics to improve the user experience as a whole.

Background of Software Development Methodologies

Research Methodology

Rich and thorough information will be gathered using a mixed-method approach. The qualitative method of content analysis will be employed where the existing data available on user experience and software design will be analyzed and the data will be collected. The quantitative method of questionnaires will be used to take the point of view of various people and companies on the increasing user experience while software development and operations.

Research Questions

* How does the entire user experience in software design change when user-centric principles of design are applied?
* What are the main elements that enhance the user experience in software design, and how may they be successfully applied?

Rationale of the Research

Discussion

Analysis of data collection

Conclusion

Recommendations

**Bibliography**

Guntupalli, R. C. C. (2008). User interface design: methods and qualities of a good user interface design. *University West*.

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