

MOBILE PARENTING SOCIO-LITERACY LEARNING APPS (M-PASL)

**Awanis Romli¹, Mazlina Abdul Majid², Aziman Abdullah³, Fatimatul Nazurah Zainuddin⁴,
Mohamad Mohsin Ismail⁵**

Faculty of Computer Systems & Software Engineering, Universiti Malaysia Pahang, Kuantan, Malaysia
¹awanis@ump.edu.my, ²mazlina@ump.edu.my, ³aziman@ump.edu.my, ⁴fatimatul@yahoo.com.my,
⁵mohd.mohsin.ismail510@gmail.com

Highlights

In 2017, the Malaysian National Family Planning and Population Board, celebrated the theme "Families, Education and Wellbeing" as a reminder of the role of education to unlock the full potential of children and their wellbeing. Therefore, the aim of this research is to develop a mobile parenting socio-literacy for the family organization which is based on the premise that if experiences from the user personality can be captured in some useful form, the tool will be able to propose the solution in having good interaction between parents and their children. Thus, the parenting guide is proposed to help parents to educate their children by knowing their personality types for both parties which are parent and child. The research is beneficial to society in promoting parenting skills that can enhance parenting literacies. Furthermore, this research is related to interactive learning and decision support system for establishing the relationship between parents and children. Hence, this research will implement the Case Based Reasoning (CBR) technique which is able to give a solution to improve the relationship between parents and child to polish, monitor and improve the strength of each individual specifically and for a family organization holistically.

Keywords: mobile apps, society 5.0, parenting, literacy, personality

Research Design

Research design explicitly explains some phases to be determined in order to conduct the research. Figure 1 shows that the research design consists of five different phases which are preliminary phase, review phase, data collection phase, development phase and validation phase. Every subtopic in this section justifies how the phases are implemented.

Preliminary Phase

In the preliminary phase, the preliminary studies were conducted in order to identify the research problem, objective and the scope of the research which are explicitly discussed in Chapter 1. This phase is the literature review from reports, published papers and journals based on the previous research and related studies.

Review Phase

Review phase is the level which undergoes the literature review for this research. This literature review was conducted to identify the main research concept, techniques, methods, and the variables for this research. This phase was conducted in order to pursue some comparisons between each of these previous papers.

Data Collection Phase (Requirement Analysis and Design Process)

In pursuing and accomplishing the objective of the research, the technique, the essential component (hardware and software) details used, process and procedures for the system were included in order to define how the application is written.

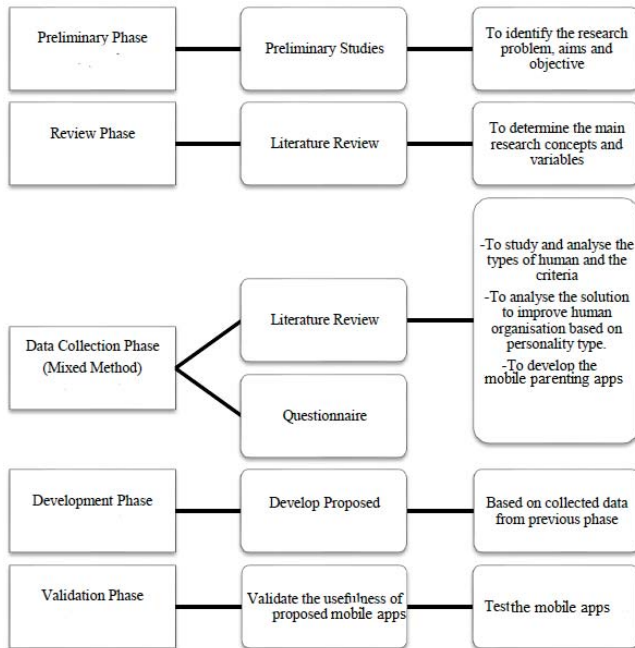


Figure 1: Research Design for Mobile Parenting Socio-Literacy Learning Apps (M-PaSL)

Development Phase

In the development process, a flow chart is constructed to ensure that the process of the system is properly structured. The development phase marks the end of the initial section of the process. Moreover, this phase signifies the start of production. The development phase is also characterised by instillation phase. Focusing on practicing can benefit more in this level.

In this study, the development phase focuses on the on the modules used in personals literacy, the technique applied in mobile website which is case-based reasoning (CBR), hardware and the software used for the website development. The progress of the phase is conducted according to the collective data from the literature review. For socio-literacy e-Profiling, the combination of the personality type and the personal literacy are concerned. As in the CBR technique, it shows the processes and methods to analyse the collected data using CBR approach. Figure 2 shows the flowchart for the process of CBR.

The processes to produce mobile application of parenting guide can be seen as a reflection of a particular type of human reasoning. In many situations, the problems that humans encounter are solved with a human equivalent of case-based reasoning. When a person encounters a new situation or problem, he or she will often refer to the past experiences of a similar problem to find a solution. In a similar process, this mobile application involves basic reasoning from previous experiences by retaining solutions of new problems (Romli, et al, 2015). The process shown in Figure 2 starts with an input features of a problem, which defines a new case without solutions. This particular new case is based on the answers from questionnaires that had been calculating the similarities for the features of input. These features are also used to retrieve cases from the case based library by searching the similar cases. In term of parenting guide as part of the solution, the information will be assessed by using the most similar case. At this stage, the users have two options. If they are not satisfied with the solutions, they can modify the feature values and run the process again in order to improve the solutions. Otherwise, if they are satisfied with the solutions, the case will be retained, and the library to be updated by storing a new learned case. Consequently, this process will increase the cases in the library that can be accessed in future, subsequently re-using solutions for the next new case.

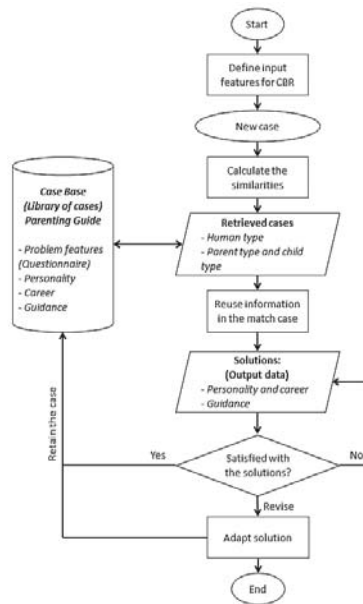


Figure 2: The process of Case-Based Reasoning (Fatinatul, 2018)

The Importance of M-PaSL

M-PaSL focuses on parent and child. Child is the person who needs to be educated with the correct way. A child wants to have a warm and loving connection with each of their parents and being able to communicate well with each other can help make that happen. Sometimes, it is hard for a child to open up to their parent. By knowing their child's type, parent can build the strong relationship with their child. Parenting can be more enjoyable when positive parent – child relationship is established. Children thrive on positive attention. Children need to feel loved and appreciated. Most parents find that it is easier to provide negative feedback rather than positive feedback. By selecting and using some of the solution on a daily basis with child, parent will find that their child will start paying more attention and will try harder to please.

The importance of M-PaSL can be summarized to the following:

- Enhance parenting competencies
- Effective interactive learning system
- Improve parent-child relationship
- Promote parenting skills in a smart society 5.0

Commercial Value

Commercial value can be benefited to other sectors as follows:

- Education: School, University. (Educators and Students)
- Workplace (Employers and Employees)
- Psychologists, career counselors, and other professionals that conduct personality assessment

Acknowledgements

We are grateful to the Department of Academic & International Affairs and Centre of Instructional Resources & e-Learning (CiRel), University Malaysia Pahang for supporting our research works in this project.

References

- Fatinatul, N. Z. (2018). Mobile Application For Support Parenting Guide By Using Case-based Reasoning. Universiti Malaysia Pahang, Kuantan
- Romli, A., Miguel, P.D.L, Setchi, R., Prickett, P., 2015. Eco-Case Based Reasoning (Eco-CBR) for Supporting Sustainable Product Design. In 2nd International Conference on Sustainable Design and Manufacturing. Seville. April 2015.