Notes from the Chief Editor

On Universal Design and Agile Development

All praise be to the Creator who made it possible for us to present this indexed and refereed *Journal of Personalized Learning* 2020 Volume 3(1). This journal was inaugurate in 2015 with two issues (2015-2017). After the early management group left for their advancement in career and studies, we had a bit of a struggle. Eventually, we manage to establish a new team and finally successfully publish the third issue this year. We would like to thank all the new management team and authors who patiently waited for this moment and we convey our deepest regret for the much delayed publication of this issue.

We accept any research paper, concept paper, review paper or reports of best practices for personalizing learning from a wide-ranging standpoint particularly focusing in the field of (i) values integration in education from the perspective of al-Quran and Hadith and (ii) personalized learning from the perspective of technology and integrated multi-disciplinary education point of view. Although the *personalized education* research group mainly use *problem-oriented project-based hybrid meaningful e-learning approach* as the pedagogy and strategy to achieve *meaningful learning*, we certainly would love to share and disseminate knowledge from multiple discipline to address the same concern. In this issue, I will start with a note about our newly improvised model for instructional design and development of personalized learning environment, product and model. We named it as **U**niversal **D**esign & Ag**i**le Developme**n**t (UDin) model. The details of UDin will be discuss in the second part of this note.

This section is the first part of my notes discussing the overall articles. The first two articles focus on approaching education system with religious base and should be a great reference for Muslim generation. For starter, article (1) by Othman is about early thinking on the need for and approaches to propose a new paradigm in the education system that integrates scholarly knowledge with Islamic revelation. Article (2) by Sempo discussed spiritual values of integrating both sciences in creating a holistic humankind, encyclopedic and integrative through integrated education across the ages. Following that, article (3) by Hashim et al. elaborates the wisdom of "pairs" from the Holy Quran and further discuss on its mystery and foundations. As it relates towards religious view, article (4) by Syed Bidin & al-Qodsi discussed the thought of Sufism in the preaching of Nursi. This thinking is built on the foundations of the syllabus that can be applied to the school curriculum and the institution of higher learning that can shape the personality of the students to achieve the goal of forming a balanced human being. The next article (5) by Ishak et al. shows the wondrous of the Quran and provide great insight and materials for those who wished to personalize the wondrous Quran learning in regards to Mathematics and at the same time, able to gain awareness and evidence of the greatness of the Quran.

The next 7 articles are generally approach towards learning where article (6) by Thomas et al. discussed about the conceptual metaphor of "LIFE IS A SCHOOL" where the findings revealed the creative ways that is used in the conceptual

metaphor to persuade audience. This definitely can benefit orators, authors and public speakers about the importance of conceptualizing metaphors to influence the audience for a lasting impression. As for article (7), Alias discussed about high perceptions among adults on learning through web blog 2.0 technology based on readiness of the group and advantages of using the technology itself. Article (8) by Ahmad Zain & Din revealed that learning modules with high level of usability can create an active learning environment and can foster students' creative value. This finding contributed to a new approach to teaching and learning that integrates online technology use and enhances students' ICT skills. Article (9) by Ariffin provides new insights into the prospect of four cultural guidelines for local cultural mobile applications in addition to the general usability design guidelines. As for article (10), Md. Aziz & Mohd Shah focuses on the lack of research on the choice of LLS used among the students hence to bridge the gap. Article (11) by Murat et al. shows that mobile applications have the potential to be used in student self-learning. The last article (12) by Nawawi et al. embarks on spiritual values gathered from Damascus Sermon's perspective. Value is an important component in education, training in human and social development. What more in a personalized education environment. There are six spiritual values discussed in the review which are hope, enthusiasm, honesty, love, unity and sincerity. These values are elaborated further as they are essentials and remedies for spiritual sickness during modern era today.

This section onwards will be the second part of my notes. It focusses on the agile version of the integrated model for instructional design, development and modelling of personalized learning environment in education. The model in question is the UDin Model (Figure 1). UDin added the much taken for granted "Learning Outcome" component. "Learning Outcome" component is aligned together with the "Assessment" component and along with, placed in the center as the innermost part of the model labeled LOA, short for **L**earning **O**utcome and **A**ssessment.

The model emphasized on continuous assessment. Rubric are mainly use as assessment tools. Assessment methods varies from gamification, reflection, visual, video and technology mediated communication to field work. Our previous work discusses in detail about the assessment method and tools. The discussion covers study conducted by Din et al. (2018, 2017a, 2017b, 2016, 2015, 2014), Othman et al. (2017), Batainah et al. (2016), Azizul & Din (2016), Salleh et al. (2015), Abdul Manaf et al. (2015) and Hamdan et al. (2015). Conventional quizzes, transformed into interactive online quizzes are also use as formative evaluation alternatives in online modules. Some courses still retain the pen and pencil test mostly for final summative evaluation.
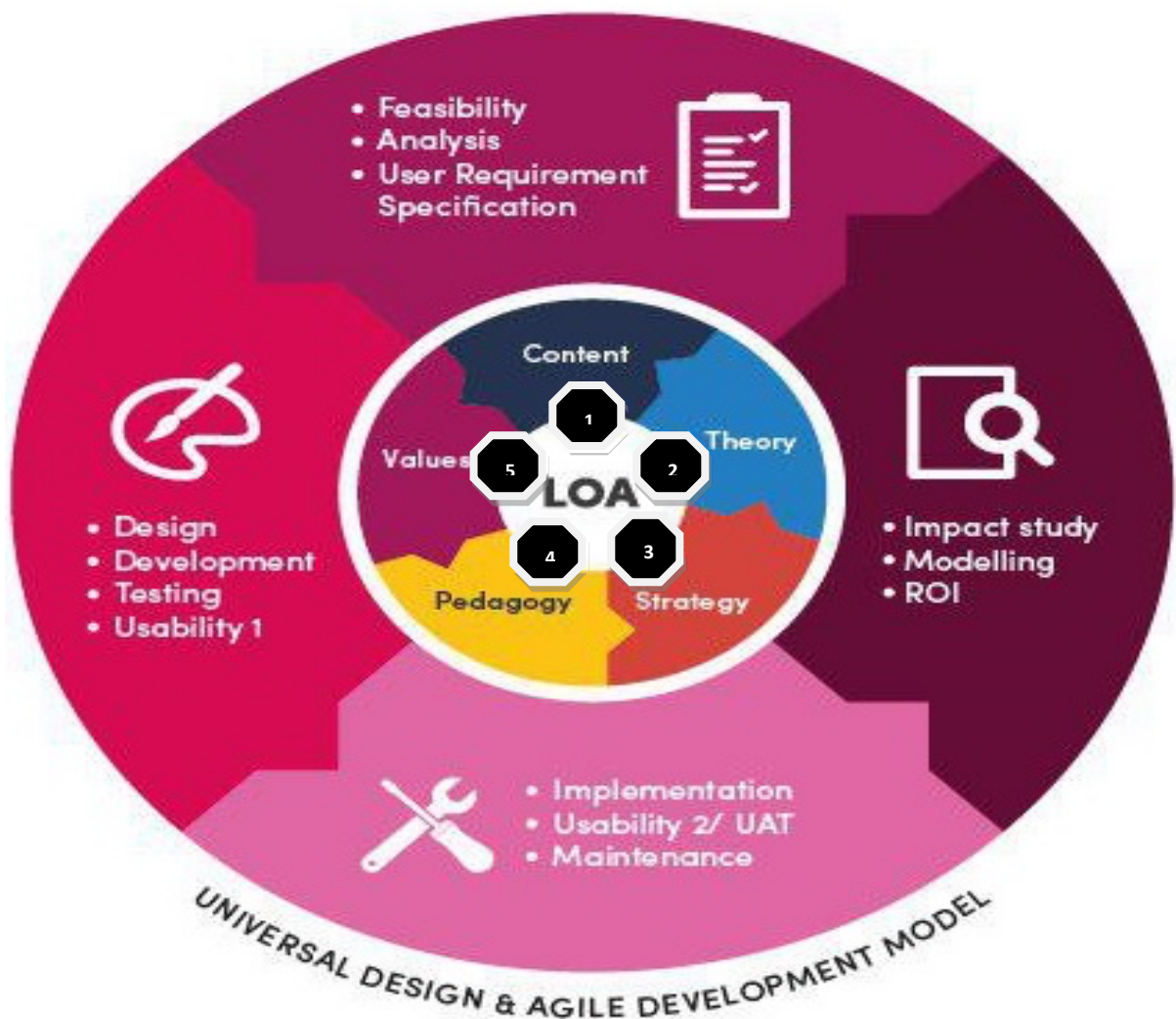

Figure 1. The Three-Layer UDin Model

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Hitherto, instructional design and development activities have not explicitly included the Learning Outcome and Assessment components in any relevant models. Hence, based on much neglect for constructive alignment of content, theory, strategy, pedagogy and values with learning outcome and assessment in many products evaluated in previous years, the UDin model explicitly include LOA at the center of the model resembling the bull's eye. Then the next layer emanates – the instructional design layer, in the middle.

All five components in the instructional design layer targeting to meet the learning outcome are in alignment with LOA. This layer in the middle is represent by the anti-clockwise motion of the arrows in between the innermost and outermost layer of the model. Note that the Values component is the fifth and new component added to the four-component instructional design layer previously referred to as the UDL instructional design (ID) model (Din, 2016). The UDL instructional design model is as in Figure 2. It is the fifth and new component in addition to the four instructional design components that are content, theory, strategy and pedagogy.
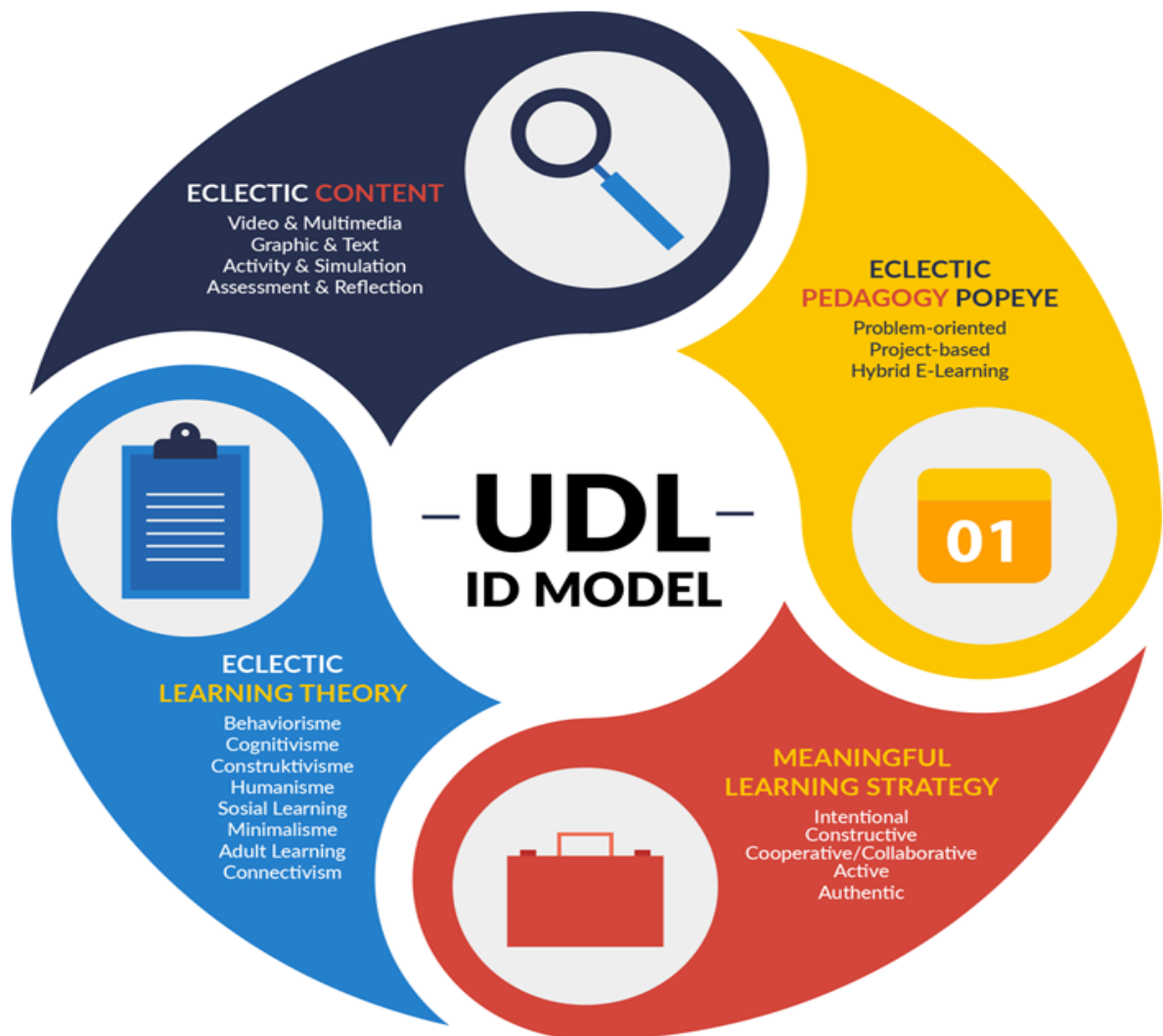

Figure 2. The Origin of ID layer in UDin from the UDL Instructional Design Model (Din, 2016)

As for the outermost layer, it represents the agile development phases originated from the RekaBangun SPP-IV Model (Din 2010, 2014, 2017) as shown in Figure 3. RekaBangun SPP-IV is short for **Reka** *Bentuk dan Pembangun*an **S***istem Pengajaran dan Pembelajaran Versi **IV*** in Malay. It means Design and Development of Teaching and Learning System Version IV. The agile development phases adapted from the RekaBangun SPP-IV suits the need of the fast-development of technology for rapid-prototyping processes and testing followed by evaluation of product for real-classroom implementation.

The RekaBangun SPP-IV model (Figure 3) outlined rigid and systematic method that ensure quality product yet will take longer to complete. UDin model combine (Figure 4) the best of agile and the best of systematic development method from RekaBangun SPP-IV model.
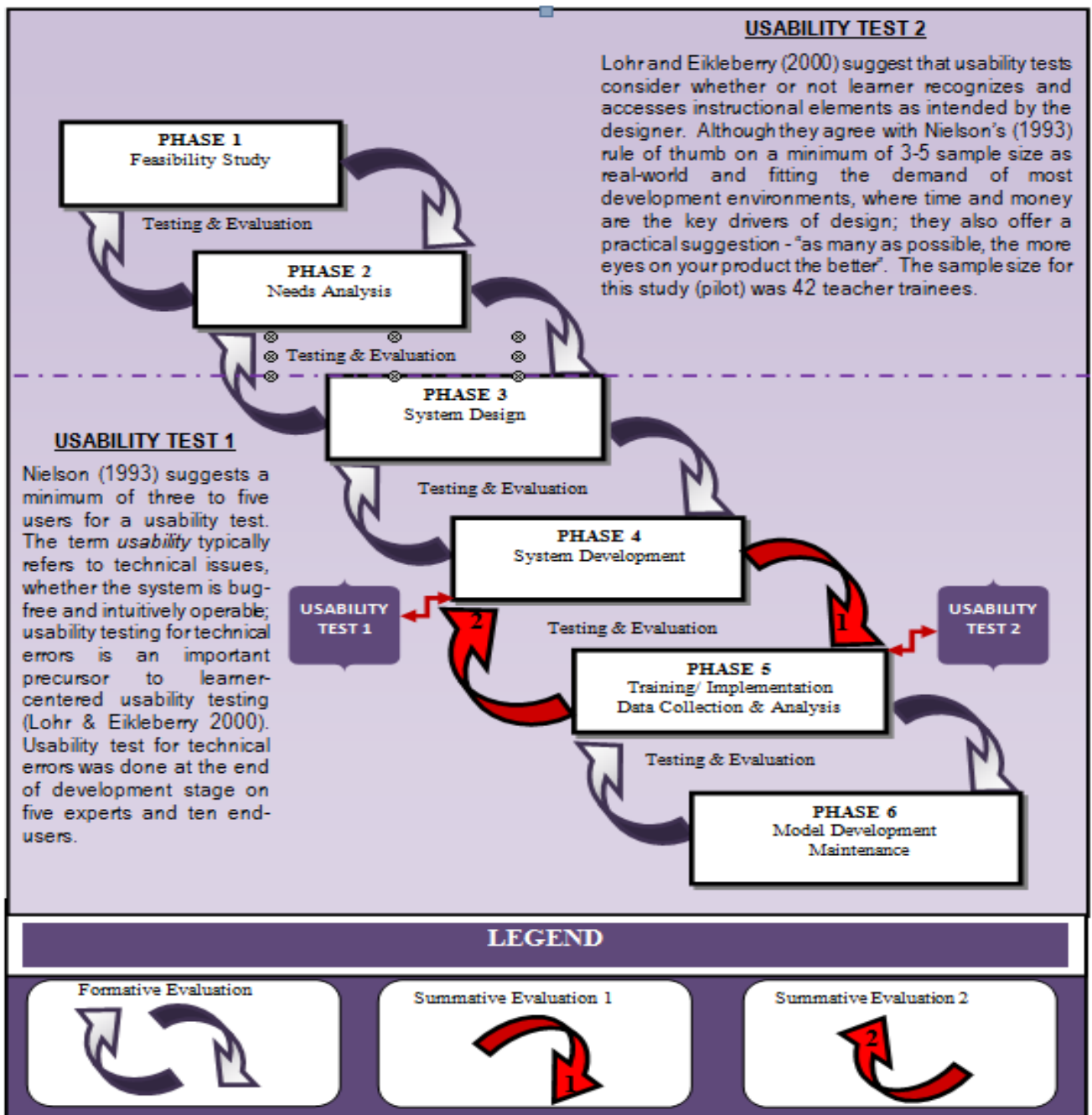
Figure 3. The Origin of Design and Development Layer in UDin Model from the RekaBangun SPP-IV Model
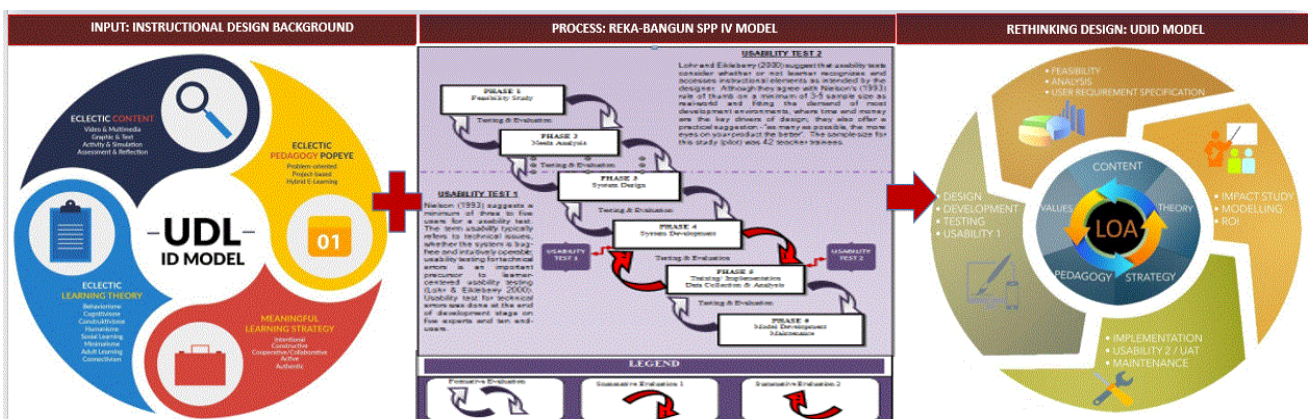(Din 2010, 2014, 2017)

Figure 4. The Transformation of UDin Model from UDL-ID Model Combined with RekaBangun SPP-IV

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Figure 5. The Origin of UDin Model – The Agile Development and Modelling Component

UDin is a comprehensive model for design, development, testing, implementation, evaluation and modeling of any immersive e-learning application or system with an iterative triangulation participatory design and validation method. To the best of my knowledge up until the current century, it is the primary model combining instructional design with development and modeling of instructional media. At the center of the model is the learning outcome (LO) or product outcome (PO) which subsequently referred to as LO. LOs are set in the beginning and determined by assessment in the end. Thus, comes the combination of LO and A making up the LOA term representing Learning Outcome and Assessment.

The inner layer outside LO is an eclectic design model embedded into developmental phases - first tested and validated in 2001 as *Model Pembangunan Sistem*. This Malay term means Development System Model. The outer layer represents developmental phases used to test and validate various applications, systems and educational product development, to come out with the improvised *Model Reka Bentuk dan Pembangunan Sistem II* (2006), *III* (2010) and *IV* (2014, 2017). As mentioned earlier, *Model Reka Bentuk dan Pembangunan Sistem* is in Malay meaning System Design and Development Model. The UDin Model aims to help novice designers escape falling the waterfall steps when using conventional and non-iterative design model. Users as co-designers are involved in all stages of design work. These stages support exploration and changing ideas as long as we start with defining the product with its learning outcome before defining the processes. The design and development method was tested and modeled for at least 12 products. Multiple number of testing and evaluation tools were use. This is to ensure when transforming to agile solution, product quality is sustained.

Much have evolve since my first involvement with computer in education research and development projects with the Ministry of Education and MIMOS in 1991, MRSM from 1993 and UKM since 1999. From ComIL to Authorware; Frontpage to WordPress; YahooGroups to SPIN, LearningCare, iFolio and now MOOC, computer or technology mediated communication has become the background of digital landscape in education all over the world including UKM and other higher learning institutions in Malaysia. The Malaysian public university's E-Learning Council had documented a MOOC strategy. With the guideline, MOOC Malaysia have been able to produce at least 350 massive open online courses or MOOCs on Open Learning platform alone since we embark on the project 3 years ago. Within the new Malaysian Education Blueprint for Higher Learning (2015-2025), MOOC is under initiative number 9, the global online education.

To move ahead, the next step we need to do is to align our MOOC outcome with our learning design. Are we able to achieve the entire outcome that we plan during the design stage? What are the factors influencing MOOC implementation and the success of participants in completing the courses? How do they accept the technology? How are MOOCs implemented and use? How are assessment done? How does the learning outcome measured and achieved? Are MOOC able to personalized learning? If it does, does it help student to achieve meaningful learning and gain transferable skills? We would like to discuss these questions in the upcoming issue. To proceed with that, it is important that we realize learning design is the significant part. With specific design, we can assess the return on investment not only from the financial perspectives but also from the learning outcome results as well.

Among the comprehensive model for design and development of learning system moulded to Asian culture is an iterative triangulation participatory design and validation method discuss in a book I wrote in 2014 reprinted in 2017, entitle *Pembinaan dan Permodelan Sistem Pengajaran*. The method is also referred to as Participatory Design method as explained in my PhD thesis published and freely accessible at http://rosseni.wordpress.com. Participatory Design (PD) is a design method recognized for involving users as co-designers in all stages of design work. In PD, people who effects a decision should have an opportunity to influence the process.

The universal design for learning model inspired the instructional design within the development model. The initial public exposure was during an invited speech at The Digital Education Show Asia 2015 entitled Executing Universal Design for Learning. Since the model uses various learning theories, content and strategies, I subsequently name it as the Eclectic Learning Design model. It is actually the same as the UDL instructional design model. The model consists of four main components. The components are eclectic learning theory, eclectic content, eclectic pedagogy and meaningful learning strategy. The eclectic learning strategy extract related principles from related theories integrated into the learning design. The associated theories are Behaviourism, Cognitivism, Constructivism, Humanism, Adult learning, Minimalism and Connectionism. The theories are in connection and aligned to the value system from the Risale-i Nur perspective. The content and activities with various medium of presentations are plan carefully during design and development stages. Theoretical principles and learning style preferences are tie with content and activities. We tested the model on Educational Technology course on Open Learning using problem-oriented project-based meaningful hybrid learning pedagogy, with various other platforms such as WordPress and Facebook Group since 2006. In February of 2016, we start running the class on Open Learning. We shall continue about this discussion and results of the media and MOOC implementation using the eclectic learning design model and values integration from the perspective of Risale-I Nur in the upcoming volume and issue.

Until we meet again in the next volume and issue in 2020. I would like to thank many people who continued to support the continuation of this journal. The list includes all Personalized Education researchers and associate researchers, International Advisory, previous (2015-2018) and current Editorial Board and management team plus many others. Most of all, many thanks are due to Nabilah Othman and Siti Farahin Ahmad Nawawi; also Huzaimi, Laila & Hudaa Mardhiyah KZ who made this issue possible to be published. Many thanks and appreciation to all my family members and students who adhered with all my weaknesses in pursuit of knowledge for this world and the hereafter. May the Lord ar-Rahman ar-Raheem bless and reward us with ikhlas and redhailallah.

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سُبْحَٰنَكَ لَا عِلْمَ لَنَآ إِلَّا مَا عَلَّمْتَنَآ ۖ إِنَّكَ أَنتَ ٱلْعَلِيمُ ٱلْحَكِيمُ