Arabic Computer Syllabus Model Based on Twenty First Century Skills

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Abstract

Globalization and the acceleration of technology in the 21st century create a new paradigm in education. Teachers are not only required to transfer knowledge but also to equip their students with various 21st-century skills. This study aims to produce a syllabus for Arabic Computer courses based on 21st century skills at the Arabic Language Education Study Program, Faculty of Language and Arts, State University of Jakarta. This development research uses the Successive Approximation Models 1 (SAM1) model, combined with the Merdeka Belajar Kampus Merdeka syllabus model. This study used data collection methods through questionnaires for expert team assessment and interviews for one-on-one trials. Data analysis used the Guttman scale, namely a score of 1 for the answer "Yes" and 0 for "No." Based on the assessment results of a team of experts and supporting lecturers, the syllabus developed was considered very good and following the principles of developing 21st century skills.

Keywords: syllabus, Arabic computer, 21st-century skills

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Abstrak

Globalisasi dan percepatan teknologi informasi pada abad 21 melahirkan paradigma baru dalam dunia pendidikan. Guru tidak hanya dituntut mentransfer pengetahuan, tetapi juga membekali mahasiswanya dengan berbagai keterampilan abad 21. Penelitian ini bertujuan untuk menghasilkan sebuah silabus mata kuliah Komputer Arab berbasis keterampilan abad 21 pada Program Studi Pendidikan Bahasa Arab, Fakultas Bahasa dan Seni, Universitas Negeri Jakarta. Penelitian pengembangan ini menggunakan model Successive Approximation Models 1 (SAM1) yang dipadukan dengan model desain silabus Merdeka Belajar Kampus Merdeka (MBKM). Penelitian ini menggunakan metode pengumpulan data melalui kuesioner untuk penilaian tim ahli dan wawancara untuk uji coba satu-satu. Analisis data menggunakan skala Guttman yaitu skor 1 untuk jawab "Ya" dan 0 untuk "Tidak". Berdasarkan hasil penilaian tim ahli dan dan dosen pengampu, silabus yang dikembangkan ini dinilai sangat baik dan sesuai dengan prinsip pengembangan keterampilan abad 21.

Kata Kunci: *silabus, komputer Arab, keterampilan abad 21*

A. Introduction

We are currently in the era of the 21st century. There are two significant challenges that we face in the 21st century, namely globalization and technological developments. The first challenge is globalization. The 21st century is synonymous with globalization, where there are no demographic boundaries between each country[1]. The impact of globalization is the occurrence of tighter competition in various fields because we compete with residents and the international community.

The second challenge is technological development. Technology developments, especially information and communication technology (ICT) and openness in its utilization are two essential phenomena predicted will be the main characteristics and have implications for changing the 21st century learning paradigm[2]. Increasingly advanced technology surpasses

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1 Aslamiah Aslamiah, Ersis Warmansyah Abbas, dan Mutiani Mutiani, "21st-Century Skills and Social Studies Education," *The Innovation of Social Studies Journal,* 2.2 (2021), 82 <https://doi.org/https://doi.org/10.20527/>.

2 Mohammad Imam Farisi, "Developing the 21st-century social studies skills through technology integration," *Turkish Online Journal of Distance Education,* 17.1

previous predictions, creating a new culture where technology slowly replaces the position of humans as labor [3].

What is our responsibility as educators to face the 21st century above? As educators, of course, we need to play an active role in equipping students with various 21st-century skills. US-based Partnership for 21st Century Skills (P21) states that there are four skills required for the 21st century, namely "The 4Cs," which consists of communication, collaboration, critical thinking, and creativity[4]. Trilling and Fadel[5] state that 21st-century skills include creativity and innovation skills within a comprehensive skills framework. Operationally, these skills can think creatively, work creatively with others, and implement innovations. Meanwhile Tan et al identified that eleven primary skills needed to succeed in the 21st century globalized world are communication and collaboration skills, critical thinking and problem solving, creativity and innovation, information literacy, media literacy, information technology literacy, flexibility, and adaptability, initiative, and self-direction, social and cross-cultural, productivity and accountability, and leadership and responsibility[6].

In education, ten 21st century skills are recommended for educators to apply to their students. The ten skills are classified into four categories: the way of thinking, working, tools for working, and skills for living in the

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(2016) <https://doi.org/10.17718/tojde.47374>.

3 Ida Bagus Putu Arnyana, "Pembelajaran untuk Meningkatkan Kompetensi 4C (Communication, Collaboration, Critical Thinking Dancreative Thinking) untuk Menyongsong Era Abad 21," in P*rosiding: Konferensi Nasional Matematika dan IPA Universitas PGRI Banyuwangi,* ed. oleh Dimas Priagung Banar Syahputra et al. (Banyuwangi: Fakultas MIPA Universitas PGRI Banyuwangi, 2019), hal. i–xiii <https://ejournal.unibabwi.ac.id/index.php/knmipa/article/view/829/567>.

4 Partnership for 21St Century Skills, "Framework for 21st Century Learning," Partnership for 21st Century Skills, 2011 <https://doi.org/http://www.21stcenturyskills.org/documents/framework_flyer_updated_jan_09_final-1.pdf>.

5 Jane Piirto, *Creativity for 21st Century Skills How to Embed Creativity into the Curriculum,* Sense Publishers, 2011.

6 Jennifer Pei Ling Tan et al., "Educating for twenty-first century competencies and future-ready learners: research perspectives from Singapore," *Asia Pacific Journal of Education*, 2017 <https://doi.org/10.1080/02188791.2017.1405475>.

world. Way of thinking includes creativity, innovation, critical thinking, problem-solving, and decision making. Way of working has skills to communicate, collaborate and work together in teams. Tools for working include awareness as global and local citizens, life and career development, and a sense of personal and social responsibility. Meanwhile, skills for living in the world are skills based on information literacy, mastery of new information and communication technologies, and learning and working through digital social networks[7].

The Ministry of Education and Culture, through the 2013 curriculum, has released a policy regarding the implementation of 4C (21st century skills) in our education curriculum. However, at the level of application, these skills have not been fully realized. One of the factors causing this is the syllabus used has not been integrated with 21st century skills itself.

Arabic Computer is one of the courses given to all students of Indonesia's Arabic Language Education Study Program. Nevertheless, the lecturers at the Arabic Language Education Study Program pay less attention to the development of this course, including the adjustment of curriculum (learning) devices to the times. This condition is, of course, quite alarming, considering that an ideal syllabus can change according to the times it faces[8]. The lack of attention from lecturers on the development of this course motivates researchers to align the objectives, content of the material, learning methods, and evaluation systems in Arabic Computer courses with 21st century skills.

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7 Patrick Griffin, Barry McGaw, dan Esther Care, Assessment and teaching of 21st century skills, *Assessment and teaching of 21st century skills,* 2012 <https://doi.org/10.1007/978-94-007-2324-5>.

8 Sabah Salman Sabbah, "English Language Syllabuses: Definition, Types, Design, and Selection," *Arab World English Journal,* 2018 <https://doi.org/10.24093/awej/vol9no2.9>.

B. Method

This research is developing research on Arabic Education Program Study, Faculty of Languages and Arts, Jakarta State University. The development model used in the development of this syllabus is Successive Approximation Models 1 (SAM 1), which is combined with the "Merdeka Belajar Kampus Merdeka" (MBKM) syllabus design model. Successive Approximation Models is a development model introduced by Micheal W. Allen in 2012. SAM is considered a development model that is more agile and responsive and opens more opportunities for collaboration than other models such as ADDIE. The SAM 1 model in this development is used as the overall development procedure, while the MBKM syllabus model is used for the design of the syllabus development itself. The development steps with the Successive Approximation Models 1 (SAM 1) consist of four main steps, namely evaluation (analysis), design, development, and final evaluation. The goal or result of this development is to produce learning products in the form of a learning syllabus.
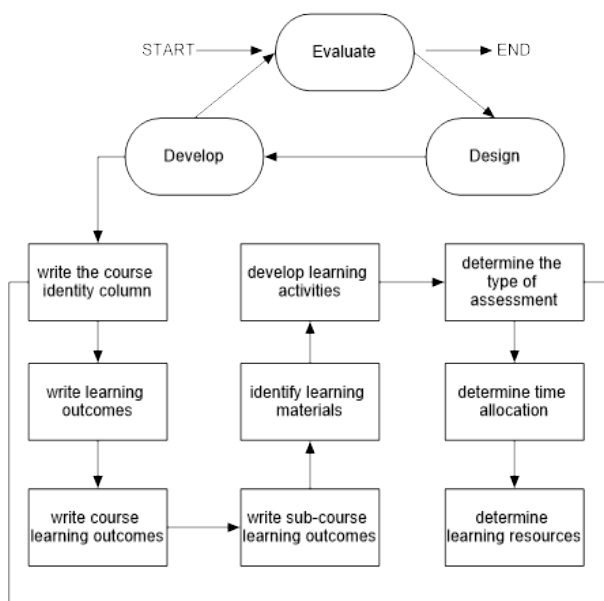

Figure 1. The combination of the sam 1 model and the mbkm syllabus model

The data collection instruments used were questionnaires and interview guides. Questionnaire data were taken from 59 students using the stratified random method, while interview data were taken from two experts and one lecturer in the Arabic Language Computer course. The data analysis technique used is descriptive statistics. Students, media experts, and learning design experts were given questionnaires using the Gutman Yes – No instrument scale. The answer "Yes" is given a score of 1, and the answer "No" is given a 0. The scores obtained are then calculated using the formula below.

The data collection instruments used were questionnaires and interview guides. This study consisted of students, material experts, learning design experts, and fellow Arabic computer lecturers. The data analysis technique used is descriptive statistics. Students, media experts, and learning design experts were given questionnaires using the Gutman Yes – No instrument scale. The answer "Yes" is given a score of 1, and the answer "No" is given a 0. The scores obtained are then calculated using the formula below.

$$\bar{x} = \frac{\text{total score obtained}}{\text{max total score}}$$

To interpret the calculation results obtained, the author then uses the following Guttman scale classification table.

Table 1. Guttman Scale Classification

Score Interval	Criteria
$\bar{x} > 0{,}8$	Very good
$0{,}6 < \bar{x} \leq 0{,}8$	Good
$0{,}4 < \bar{x} \leq 0{,}6$	Enough
$0{,}2 < \bar{x} \leq 0{,}4$	Less
$\bar{x} \leq 0{,}2$	Very Less

C. Result and Discussion

The results show that students need some computer skills and 21st century skills. Therefore, it is necessary to develop a syllabus for Arabic Computer courses that can accommodate the needs of these students. As a response to the needs analysis, the researcher designed a new syllabus that was integrated with 21st century skills. Based on the assessments of experts and subject lecturers, the syllabus prepared by the researcher was appropriate to be applied to Arabic computer courses because it met the needs of mastering computer skills and 21st century skills required students are expected.

1. Evaluate (Analysis)

In the evaluation step, the researcher conducted needs analysis and analysis of student characteristics.

a. Need Analysis

The initial step was to collect initial information by distributing questionnaires to students and conducting interviews with Arabic computer lecturers. The following are the results of gathering information at an early stage.

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59 jawaban

Skill	Value
Memahami komponen dan fun…	48 (81,4%)
Menulis dokumen berbahasa A…	53 (89,8%)
Menyusun presentasi berbahas…	51 (86,4%)
Menghitung statistika deskriptif…	49 (83,1%)
Mengutip referensi berbahasa…	52 (88,1%)
Mendesain poster berbahasa A…	49 (83,1%)
Memproduksi audio berbahasa…	44 (74,6%)
Memproduksi video berbahasa…	49 (83,1%)
Memproduksi permainan atau…	48 (81,4%)

Figure 2. Student's perception of required computer skills

In the figure 2 above, we can see that of the 59 students. The majority stated that they needed the mastery of computer skills which included the following materials.

1) Understanding of computer hardware components and functions
2) Arabic document writing skills
3) Skills in arranging Arabic presentation slides
4) Ability to calculate simple statistics in Arabic
5) Skills in using Arabic language reference management applications
6) Arabic poster design skills
7) Ability to make Arabic audio-videos
8) Make a simple application in Arabic

The reasons for students' need for these skills are divided into three, namely short-term, medium-term, and long-term reasons. In the short term, students need these skills to be able to do college assignments and final assignments (writing thesis) well. Meanwhile, for the medium term, students believe that these skills are needed to support their work in the future. As for the long term, students believe that these skills are necessary capital to compete globally in the future.

The various Arabic computer skills offered above are a mixture of information, media and technological skills with career (work) skills. However, skills in the field of information technology and computers affect a person's career. Today, workers need to be skilled in information technology and computers (ICT) [9]. Literacy in ICTs should enable workers to create, evaluate and make effective use of information, media, and technology. Workers with a good knowledge of ICTs will be able to work in an effective and efficient manner[10].

In the end, the researcher proposes material to create games with a simple coding. In many new generation computer games, players are

9 Alfonso Infante-Moro, Juan-Carlos Infante-Moro, dan Julia Gallardo-Pérez, "The Importance of ICTs for Students as a Competence for their Future Professional Performance: the Case of the Faculty of Business Studies and Tourism of the University of Huelva," *Journal of New Approaches in Educational Research*, 8.2 (2019), 201 <https://doi.org/10.7821/naer.2019.7.434>; Krish Chetty et al., "Bridging the digital divide: measuring digital literacy," *Economics,* 12.1 (2018) <https://doi.org/10.5018/economics-ejournal.ja.2018-23>.

10 Jovelin Lapates, Adelda Cunanan, dan Hazel Jean Abejuela, *ICT Integration in the Workplace: Its Impact to the Community*, 2019.

empowered to create their own worlds, while influencing the political, cultural, and social aspects of the games they play. But instead of doing it with someone else's Games, young people are now capable of creating their own games. Game-Based Learning May also refers to the use of software applications that allow students to create their own digital games possessions. Game-based learning can also refer to the use of software applications that allow students to create their own digital games. Building on constructivist learning theories, where learning comes about through the creation of something physical or virtual, recent research has focused on the potential of developing games to improve learning[11].

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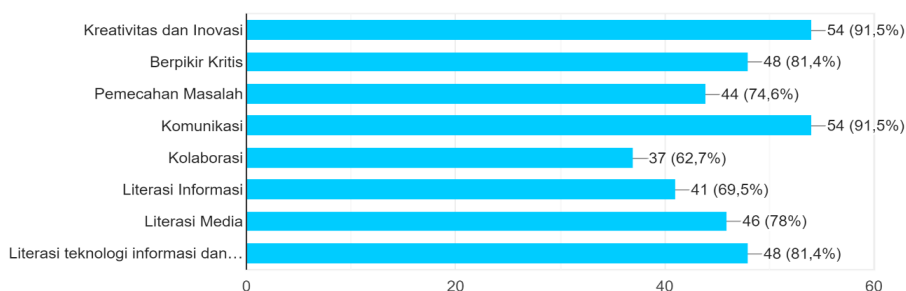59 jawaban

Figure 3. Student perceptions of 21st century skills required

In figure 3 above, we can see that most students stated that they needed 21st-century skills consisting of creativity formulation, critical thinking, problem-solving, collaboration, communication, and information technology literacy. In general, there are two reasons why they need these 21st century skills. First, students do not know these skills, and they want to know them. Second, students worry that they will not compete if they do not master 21st-century skills.

The skills of the 21st century is currently considered a prerequisite for being competitive and successful in the future. According to

11 Tasos Barkatsas dan Adam Bertram, *Global Learning in the 21st Century* (Rotterdam: SensePublishers, 2016).

Educational Leadership, a growing number of business leaders, politicians, and educators agree that today's students need 21st century skills to be successful[12]. The National Education Association (2015) study shows that 80 percent of executives believe that merging the 4CS (communication, collaboration, critical thinking, and creativity) would ensure students are better prepared to enter the world of work. According to these managers literacy and numeracy skills are not enough if employees are unable to think critically, solve problems, collaborate, or communicate effectively[13].

Dari beberapa keterampilan-keterampilan komputer berikut ini, keterampilan mana saja yang sudah dan belum Anda kuasai (pilih salah satu saja "ya" jika sudah dikuasai atau "tidak" jika belum). .
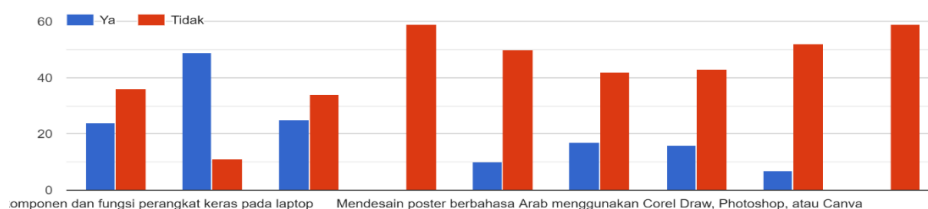
Figure 4. Student perceptions of computer skills that have been mastered

Based on the questionnaire results above, most students have not mastered the various Arabic computer skills needed, except for the ability to write Arabic documents. This document writing skill is a fundamental skill related to the use of word processing applications such as Microsoft Word. They already have relatively good essential skills. It is just that these skills still need to be developed in the aspect of using Arabic features in the application.

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12 Bruce Oliver, "Strategies That Promote 21st Century Skills," *Just ASK*, 13.12 (2016), 1–6 <https://justaskpublications.com/just-askresource-center/e-newsletters/just-for-the-asking/strategies-that-promote-21st-century-skills/>.

13 Dennis Van Roekel, *"Preparing 21st Century Students for a Global Society an Educator's Guide to the 'Four Cs' able of Contents,"* National Education Association, Great Public Schools for Every Student, 2016.

Although there is a gap between the required Arabic computer skills and those that have been mastered, various eternal skills have been partially integrated into the learning process. This fact can be seen from the 21st century skills mastery questionnaire for students as follow:

Dari beberapa keterampilan-keteranpilan abad 21 berikut ini, keterampilan mana saja yang sudah dan belum diterapkan pada mata kuliah Komputer Ara..." jika sudah diterapkan atau "tidak" jika belum).
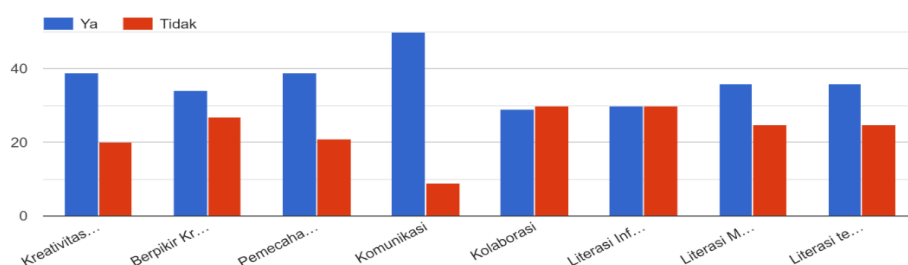

Figure 5. Student perceptions of 21st century skills that have been mastered

The results of the questionnaire above show that some students have mastered some of the skills needed. This student's answer is from interviews with lecturers who stated that some 21st century skills had been integrated into assignments. Nevertheless, integrating 21st century skills still needs to be developed, especially in learning outcomes, teaching materials, and learning methods.

Based on Graphs 3 and 4 above, we know that the fundamental gap that arises between student needs and skills is largely related to digital citizenship. The digital citizenship term creates a new form of citizenship Alberta [14]. In other words, people who know how to use digital technologies and who are ethical, respectful, and responsible in virtual environments are referred to as digital citizens [15]. Digital citizenship is defined as the norms

14 Alberta Education, *Digital Citizenship Policy Development Guide,* Alberta Education, 2012.

15 Ahmet Çubukcu dan Şahin Bayzan, "Digital citizenship perception in Turkey and the conscious perception of the internet, safe and effective methods to increase usage," *Middle Eastern & African Journal of Educational Research,* 5 (2013), 148–74.

of behavior related to the use technology[16] . Especially in the last few years, due to use of technologies such as the internet, computer, smart boards in education, it has become necessary for students and teachers to use these technologies[17] . According to the concept of digital citizenship is learned from an early age[18] . This situation shows the need for effective digital citizen education in schools. Although the development and developing technology have a positive effect on education, the misuse of the internet and computers in andside out of school is increasing day by day [19].

Arabic Computer Competence and 21st century skills offered in the development of this syllabus are not only by the needs of students but also with their wishes. This fact can be seen from the results of the questionnaire below.

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59 jawaban

Figure 6. Computer skills students want to master

16 Karen Mossberger, "Towards digital citizenship: Addressing inequality in the information age," *Routledge Handbook of Internet Politics,* 2009, 173–85.

17 Audrey Bowser et al., "Professional Learning: A Collaborative Model for Online Teaching and Development.," *SRATE Journal,* 26.1 (2017).

18 Mike Ribble, "Digital Citizenship in Schools," *An Excerpt from Digital Citizenship in Schools 2nd Edition,* 3777 (2011).

19 Aytaç Kaya dan Berna Kaya, "Teacher candidates' perceptions of digital citizenship," *International Journal of Human Sciences./ Uluslararası İnsan Bilimleri Dergisi,* 11.2 (2014), 346–61 <https://doi.org/10.14687/ijhs.v11i2.2917>.

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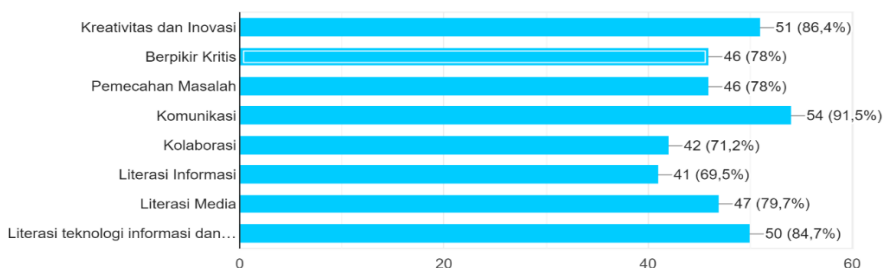59 jawaban

Figure 7. 21st century skills students want to master

From the two figures above, most students want to master various Arabic computer skills and 21st-century skills offered in the development of this syllabus. The main reason students want to master these skills is that they are highly contextual to their future field of work. In addition, students want to develop themselves through mastering Arabic computer skills and these 21st-century skills.

The hope of students to master computer skills and 21st century skills above is a challenge for lecturers. Educators need to complement all these subjects with 21st century skills to prepare young people for citizenship and the global workforce. Hence, the educators need to organize the strong vision of the 21st framework into teaching and learning activities to guarantee the success of every child as a citizen and worker in the 21st century[20] .

Meeting the challenges of our society today requires educational excellence like never, and our school systems need to respond better to a changing world. As teachers, we can help our students connect learning with real life and provide them with the skills necessary to prepare them for success in life. According to the OECD Learning Framework 2030, education plays a crucial role in developing the knowledge, skills, attitudes,

20 Partnership for 21st Century Learning, P21 Framework Definitions, Partnership for 21st Century Learning, 2015.

and values that enable people to contribute to and benefit from an inclusive and sustainable future. In the years to come, it will be important to learn how to formulate goal-oriented goals, work with others with different perspectives, find opportunities and identify diverse solutions to major problems in the coming years. Therefore, education must provide students with the skills they need to become active, responsible, and engaged citizens[21] .

b. Student Characteristics Analysis

In preparing lesson plans, it is essential to pay attention to the characteristics of students who will be directly involved in the learning process. Based on the questionnaire distributed to students of the Arabic Language Education Study Program, most of their learning styles are kinesthetic. The kinesthetic learning style is multimodal and uses a combination of sensory features. Kinesthetic learners learn by touching, moving, or doing [22] . Kinesthetic learners prefer to be directly involved in learning because they will emphasize their experience when learning something [23]. This kinesthetic style of learning is indeed best suited to be applied to hands-on courses such as Arabic computers. Experience is seen as meaningful to kinesthetic learners. Activities like experimenting, creating, tinkering, demonstrating movement, acting, or role-playing are activities that they are very interested in [24].

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21 Ruth Benander, "Future of education and skills 2030: Conceptual learning framework," in *8th Informal Working Group (IWG) Meeting,* 2018.

22 Safrul Muluk, Habiburrahim Habiburrahim, dan Siti Rechal Rechal, "Students' Awareness and Perception Towards Learning Styles," *JURNAL ILMIAH DIDAKTIKA: Media Ilmiah Pendidikan dan Pengajaran,* 20.2 (2020) <https://doi.org/10.22373/jid.v20i2.5229>.

23 William A Drago dan Richard J Wagner, "Vark preferred learning styles and online education," *Management Research News,* 27.7 (2004), 1–13 <https://doi.org/10.1108/01409170410784211>.

24 B. Widharyanto dan Heribertus Binawan, "Learning style and language learning strategies of students from various ethnics in Indonesia," *Cakrawala Pendidikan*, 39.2 (2020) <https://doi.org/10.21831/cp.v39i2.28173>.
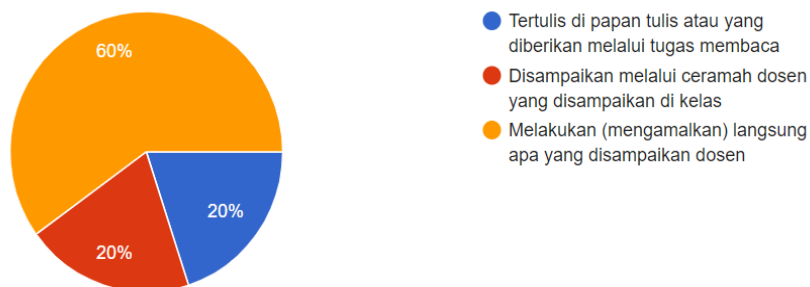
Saya dapat mengingat dengan baik informasi yang....

Figure 8. Kinesthetic learning style with the majority of students

2. Design

At this design stage, there are several activities carried out by researchers. This activity includes an analysis of learning outcomes, learning activities, learning resources, and evaluation. In detail, this design stage consists of the following actions.

a. Identify learning outcomes (CPL) imposed on courses. Based on document analysis and team discussion, the CPL charged for this Arabic Computer course consists of S-8, S-9, KU-1, KU-5, P-5, KK-5, and KK-12.

b. Formulate course learning outcomes (CPMK) specific to courses based on the CPL imposed on the Constitutional Court. The CPMK formulated in the developed syllabus consists of nine CMPK developed from the CPL.

c. Formulate sub-CPMK, which is the final capability planned at each learning stage and is formulated based on CPMK.

d. Conducting learning analysis to provide an overview to students of the stages of learning that will be undertaken.

e. Conduct learning needs analysis to determine the need for the breadth and depth of learning materials and the necessary learning tools.

f. Determine indicators of achievement of Sub-CPMK as the final capability planned at each learning stage to fulfill CPL.

g. Establish assessment criteria and develop learning assessment instruments based on indicators of achievement of Sub-CPMK.

h. Select and develop learning forms, learning methods, and student assignments as learning experiences.

i. Develop learning materials in the form of teaching materials and appropriate learning resources. In this developed syllabus, 13 materials are set to be delivered to students. These materials are taken from several primary references, which are summarized in the form of presentation slides.

j. Develop and evaluate learning. Learning evaluation consists of, first, formative evaluation, which aims to improve the learning process. Second, summative evaluation aims to determine student learning outcomes.

3. Development

At the development stage, all Arabic Computer materials and development procedures have taken are designed in a syllabus with data obtained from the design stage. The syllabus development adopts the MBKM syllabus design model, which is currently being applied to universities. The steps for developing the syllabus are as follows:

a. Write the identity column

At this stage, the researcher wrote down the identity column filled in according to the school's name, the name of the subject, the name of the class, the duration (time) of the lesson.

b. Write learning outcomes

At this stage, the learning outcomes that students in Arabic Computer courses must master are written.

c. Write course learning outcomes (CPMK)

At this stage, the learning achievements of the subjects assigned to the Arabic Computer course are written. The learning outcomes of the compiled courses are a representation of the primary learning outcomes.

d. Write sub course learning outcomes (Sub-CPMK)

At this stage, the learning achievements of the subjects assigned to the Arabic Computer course are written into several sub-sections. The learning outcomes of the developed courses are a representation of the learning outcomes imposed on these courses.

e. Identifying the primary learning materials

At this stage, identify the primary learning materials based on document studies and discussions with fellow Arabic computer lecturers.

f. Developing learning activities

At this stage, the researcher develops learning activities designed by mentioning the learning model or method that will be carried out to achieve a learning achievement for students. In choosing a learning experience, all the factors needed in learning activities must be integrated with a 21st-century skills approach, namely critical thinking and problem solving, collaboration, communication, creativity, and innovation. The results of the selection of learning experiences are carried out by discussing with lecturers and learning designers.

g. Determine the type of assessment

At this stage, the researcher determines the assessment of learning outcomes that will be used. The assessment that will be used is selected based on the learning outcomes to be achieved. The types of assessment used in the syllabus are authentic assessment, performance assessment, and portfolio.

h. Determine time allocation

At this stage, the time allocation is determined by considering the amount of breadth, depth, difficulty level, and learning outcomes. The

number of meetings for this course is 16 meetings, with two credits each per meeting. One credit consists of 50 learning process activities, 60 minutes of structured assignment activities, and 60 minutes of independent activities[25].

i. Determine learning resources

At this stage, it is determined that the learning resources will be used to study certain materials according to the learning outcomes. The learning resources used in this syllabus are books, journals, video tutorials, and several related applications.

The curriculum development steps above relate to the learning development process in the MBKM curriculum. The guide line for creating the MBKM curriculum state that the stages of learning development are carried out in at least ten stages, namely: (1) identify learning outcomes (CPL); (2) formulate learning outcomes in courses (CPMK); (3) formulate sub-CPMK; (4) perform learning analysis; (5) analyze learning needs; (6) determine performance indicators for sub-CPMK; (7) define assessment criteria and assessment tools; 8) choose forms of learning methods and tasks; (9) develop learning materials and (10) develop and evaluate learning[26].

The course learning outcomes (CPMK) formulated in the syllabus relate to survival skills, which are the goal of 21st century skills. Wagner identified seven survival skills: (1) critical thinking and problem solving; (2) collaboration across networks and leadership through influence; (3) agility and adaptability; (4) initiative and entrepreneurship; (5) effective oral and digital communication; (6) access and analyze information; and (7) curiosity and imagination[27] .

25 Direktorat Jenderal Pembelajaran dan Kemahasiswaan, *Panduan Penyusunan Kurikulum Pendidikan Tinggi di Era 4.0, 3 ed.* (Jakarta: Direktorat Jenderal Pembelajaran dan Kemahasiswaan Kementerian Riset Teknologi dan Pendidikan Tinggi, 2018).

26 Aris Junaidi et al., *Panduan Penyusunan Kurikulum Pendidikan Tinggi di Era Industri 4.0 Untuk Mendukung Merdeka Belajar-Kampus Merdeka,* ed. oleh Sri Suning Kusumawardani, IV (Jakarta: Direktorat Jenderal Pendidikan Tinggi Kementerian Pendidikan dan Kebudayaan, 2020).

27 Ali M. Al Kandari dan Mousa M. Al Qattan, "E-task-based learning approach to enhancing 21st-century learning outcomes," *International Journal of Instruction,* 13.1 (2020) <https://doi.org/10.29333/iji.2020.13136a>.

In learning activities, the syllabus is designed using project-based learning (PjBL) and problem-based learning (PBL) models. Project-based learning (PjBL) refers to an exploratory teaching method that involves learners in building knowledge by carrying out meaningful projects and developing real-world products[28] . Meanwhile, problem-based learning is a teaching and learning model that presents many authentic problems that are meaningful to students[29] .

The application of these two learning models (PjBL and PBL) is in accordance with the 21st century learning framework. 21st century learning must lead students to be able to solve problems and innovate. In addition, previous research has shown that students are able to train 21st century skills [30].

4.   Evaluation

a.   Expert Review

After the syllabus for printing graphic design subjects was developed according to the stages contained in the SAM1 model, it was combined with the MBKM syllabus development model. Then the product was reviewed by experts and tested by users. Expert reviews were carried out to two experts, namely material experts and learning design experts. In the next stage, the developer conducts a trial of the Arabic Computer course syllabus one-to-one (one-to-one) to users, namely the lecturers who teach courses through interviews.

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28 Joseph S. Krajcik dan Namsoo Shin, *"Project-Based Learning," in The Cambridge Handbook of the Learning Sciences,* ed. oleh R. Keith Sawyer (Cambridge: Cambridge University Press), hal. 275–97 <https://doi.org/10.1017/CBO9781139519526.018>.

29 Richard Arends, *Learning to teach, Connect, learn, succeed CN - LB1025.3 .A74 2012,* 9th ed (Dubuque, Iowa: McGraw-Hill, 2012).

30 Tantri Mayasari et al., "Apakah Model Pembelajaran Problem Based Learning dan Project Based Learning Mampu Melatihkan Keterampilan Abad 21?," *Jurnal Pendidikan Fisika dan Keilmuan (JPFK),* 2.1 (2016), 48 <https://doi.org/10.25273/jpfk.v2i1.24>.

Table 3. Table 2 Material Expert Assessment Results

No.	Question	Score Yes = 1	No = 0
1	The suitability of the material with the Learning Outcomes of the Course	1	
2	The suitability of the material with the Sub-Current Learning Outcomes (Sub-CPMK)	1	
3	The suitability of the material with learning activities	1	
4	The suitability of the material with the learning method	1	
5	Consistency between subject and sub subject	1	
6	Learning materials are arranged systematically	1	
7	Suitability of learning materials with student characteristics	1	
8	Learning materials can support 21st century skills	1	
9	Learning materials in accordance with the demands of 21st century skills	1	
Total		**9**	
Average		**1**	

Based on the results of a review conducted by a material expert, an average value of 1 ($\bar{x} > 0,8$) was obtained. The results of the expert review indicate that the quality of the product in terms of material can be said to be very good.

Table 4. Learning Design Expert Assessment Results

No.	Question	Score Yes = 1	No = 0
1	The suitability of learning outcomes (CPL) with course learning outcomes (CPMK)	1	
2	The suitability of course learning outcomes (CPMK) with sub-course learning outcomes (Sub-CPMK)	1	
3	The suitability of learning methods with CPMK	1	
4	The suitability of learning methods with Sub-CPMK	1	
5	The consistency of the stages of presenting material in learning activities	1	
6	The Suitability of learning methods with learning materials	1	
7	The Suitability of learning materials with student characteristics	1	
8	Learning activities can support 21st-century skills.	1	
9	Learning activities in accordance with the demands of 21st-century skills	1	
Total		**9**	
Average		**1**	

Based on the results of a review conducted by a learning design expert, an average score of 1 ($\bar{x} > 0,8$) was obtained. The results of the expert review indicate that the quality of the product in terms of the suitability of the syllabus components can be said to be very good.

Table 5 Average Expert Review

No	Indicator	Average
1	Material Expert	1
2	Learning Design Expert	1
Total		**2**
Overall average		**1**

From the results of calculating the average quality of the expert review above, it is obtained a value of 1 ($\bar{x} > 0,8$). These results can be said that the syllabus developed has an excellent quality in every component of the syllabus and learning materials.

b. One-to-one Evaluation

Based on the results of one-on-one trials conducted on course lecturers, it was found that the syllabus developed was good, acceptable, and following 21st-century skills. It can be seen from the results of interviews that have been carried out, information is obtained that each component developed in the syllabus is (1) learning outcomes are appropriate, (2) learning materials are following needs, (3) learning methods are following the principles of developing 21st-century skills. (4) assessment activities have a clear flow and support the development of 21st-century skills, (5) the syllabus can develop 21st-century skills in students. Overall, the syllabus developed follows the demands of mastery of 21st-century skills.

D. Conclusion

Globalization and technological advances encourage lecturers to transfer knowledge to their students and equip them with 21st-century skills that include creativity, collaboration, communication, critical thinking, solving problems, and having information technology literacy. Therefore, the syllabus for Arabic Computer courses at the Arabic Language Education Study Program, Faculty of Language and Arts, State University of Jakarta, needs to be developed by adjusting to the needs of mastering 21st-century skills. Based on expert assessments and interviews with subject lecturers, the syllabus is developed by combining The Successive Approximation Model 1 (SAM 1) model and the "Merdeka Belajar Kampus Merdeka" syllabus model is excellent and in line with the development of 21st-century skills.

This study contributes to the concept of developing a 21st century skills-based syllabus in Arabic Computer courses. Research on this subject itself is still very rarely done even though Arabic computers are a compulsory subject in Arabic education study programs throughout Indonesia.

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