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Designing Online-Based Independent Learning Network for the Development of Arabic Language Research Methodology (ALRM) at State University of Malang, Indonesia

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Abstract

The objective of this study is to describe the development of online-based independent learning of Arabic Language Research Methodology (ALRM) subjects through a learning network (*sistem pembelajaran dalam jaringan*) at Arabic Literature Department, Faculty of Letters, Universitas Negeri Malang (ALD FL UM). This research used Research and Development (R & D) design approach. The output of this research are (a) e-learning ALRM teaching materials through the *sistem pembelajaran dalam jaringan* is in the form of pdf, PowerPoint, film, and animation, (b) e-learning structured assignments and feedback, (c) conducting test with multiple choices form. The material developed is the material of Research and Development and Classroom Action Research. The research results show that the ALRM subjects development based on online learning through learning network is very effective both from the quality of the product and from the aspects of the process and learning outcomes. The main factor that causes the effectiveness of this product is the flexibility of time and place which can psychologically create a condition of student affection filters to be low or loose. The relaxation of the affection filter is marked by a sense of pleasure, excitement, and comfort in learning. The implication of this online-based learning system is that teaching materials that are equipped with specific and measurable indicators, assignments and tests are more easily understood by students.

Keywords: Arabic language research methodology subjects, effectiveness, Independent learning, Learning network, Online learning, undergraduate.

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Ethical: This study follows all ethical practices during writing.

Contents

Contribution of this paper to the literature

This study contributes to the literature by adding more information about online learning of Arabic language research methodology of Indonesian undergraduate students. This study has shown that the students are empowered to enjoy their learning through online systems.

1. Introduction

In the domain of Research methodology, the Arabic Language Research Methodology (ALRM), is considered to be an interdisciplinary study. There are at least three major things related to this ALRM: What, for What, and How. The term 'What' involves the problem or the substance of research in the perspective of the philosophy of science called ontology. While 'for What' relates to the benefits or contributions of the research results towards the development of science and technology, as well as arts both theoretically, practically, in the perspective of the philosophy of science called axiology. Lastly, 'How' refers to the manner or procedure of research also known as epistemology.

Ontologically, the Arabic Language Research Methodology includes three main attributes: pure linguistics, applied linguistics, and Arabic literature. Studies related to pure linguistics or theoretical linguistics include phonology, morphology *(Sharf)*, Syntax *(Nahwu)* and Semantics *(Ad-Dilalah)* . The domain of Applied Linguistics includes Arabic learning systems. Meanwhile, Arabic literature is both oral and written, and it can be in the form of poetry as well as prose studies, drama and Arabic stylistic systems studies. Thus, students who take the MPBA subject must have scientific insights related to Arabic linguistics, both theoretical and applied, and have knowledge related to Arabic literature.

In addition to mastering the field of ontology, students who take this subject must also master the field of epistemology. That is, students must be able to conduct research with the right procedure. This epistemological dimension is the spirit in ALRM learning. This illustrates that the substance of the ALRM subject is not single-dimensional but multi-dimensional. Competencies that must be possessed by students are not only limited to the field of ontology but they must also master research methods simultaneously and integratively, in order to conduct research with the right procedure following the research objectives.

ALRM subject is the major course that must be opted by students to prove their mastery of the subject.. Through this subject, students are expected to have a scientific attitude manifested in the form of an objective, skeptical, rational, critical, analytical, and evaluative mindset. On the other hand, students are also expected to have sensitivity to strategic and actual issues, both related to the field of study. The implication is that they are expected to provide solutions systematically, objectively, comprehensively, and practically.

On the other hand, the substance of this ALRM subject is very complex because it is the result of a fusion of courses from various disciplines. The complexity of the substance of the ALRM implicates in the existence of obstacles *(mu'awwiqat)* for students to fully master and internalize this ALRM at both theoretical and practical levels. Having the experience as a supervisor of a bachelor thesis or dissertation gives us a fact that many students face difficulties and errors in the methodological aspect. For example, the difficulties they face belong to determining the approach and design of the research, the sampling technique, and the approach and steps of data analysis.

To solve the problems, learning innovations through the Problem Based Learning (PBL) approach is recommended. The results indicate that the use of PBL in ALRM learning is more effective both in the process and results than conventional learning models like lecturing and class discussions (Ainin, 2017). This phenomenon shows that learning innovation has a positive impact on the quality of learning or lecture.

In this information technology era, the learning paradigm has shifted from a face-to-face system limited by classrooms and time to an online-based learning system utilizing the internet network. The pattern of interaction between educators and students is no longer direct in nature but through the internet network. One example is the electronic learning (e-learning). E-learning is a revolution in the field of education based on the internet. E-learning is expected to be an alternative for developing a more effective and efficient education system at a lower cost in the future (Hartanto and Purbo, 2002).

E-learning is an internet application that can connect educators and students in an online learning room. E-learning is created to overcome the limitations between educators and students, especially in terms of time and space. With e-learning, the teaching and learning process can be effective and can accelerate the learning process so that all material can be delivered following the semester learning (lecture) plan and the time allocation provided through e-learning. This e-learning teaching material facilitates students to learn independently. It is more enjoyable and free from psychological stress that occurs in informal classes. However, learning materials must be well designed and still prioritize the principles of good instructional design.

Several studies related to the effectiveness of the information technology utilization on learning outcomes show that the use of Information and Communication Technologies (ICT) affects learning outcomes. A study conducted by Dwi and Sentot confirms that the understanding of concepts and the ability to detain physics problems in groups of students taught using ICT-based PBL strategies is significantly higher than groups of students who are only taught using PBL strategies (Dwi *et al.*, 2013). Hassaskhah *et al.* (2014) also proved that the ability of Iranian students to read paper texts is higher than through digital (Hassaskhah *et al.*, 2014). However, they stressed upon the use of computer technology for English Foreign Language (EFL) students as well as for those who have the access to the latest information through internet.

Universitas Negeri Malang (UM) or State University of Malang, one of the higher education institutions carrying the mandate in the field of learning innovation, has developed a Learning Networks (*Sistem Pembelajaran dalam Jaringan* or SIPEJAR). Since 2008, UM has had a Learning Management System (LMS) with the Moodle Platform. Moodle is a name for a web-based application program for managing learning. This application allows students to log in to digital classrooms to access learning materials (Cavus and Alhih, 2014; De Smet *et al.*, 2016b) (Cavus and Alhih, 2014; Sofia and Diniz, 2014; De Smet *et al.*, 2016b). By using Moodle, lecturers can create learning materials, quizzes, electronic journals, and others. Also, this Moodle platform enables the distance

learning system not limited by space and time because lecturers can provide material from anywhere, thus students can attend class from anywhere.

This Moodle platform can be used for e-learning or distance learning. By this concept, the teaching and learning system will be unlimited in space and time (Abulibdeh and Hassan, 2011; Cavus and Alhih, 2014; Zacarias *et al*., 2016). A teacher can provide material from anywhere. Likewise, a learner can attend class from anywhere. In addition to the consideration of flexibility, psycho-socio-cultural, the digital world in the Millennial era is an inseparable part of the lives of students. In their daily lives, students are very familiar and enjoy accessing information through the internet network.

To reduce the boredom of learning with conventional models, and to create enthusiasm and new situations, to accommodate students' interests in the online world, and to create learning independence, a learning innovation is needed by developing a new paradigm in the form of an e-learning-based independent ALRM lecture system through the *sipejar* in the Department of Arabic Literature, Faculty of Letters, Universitas Negeri Malang.

The objectives of this study are to: (a) describe the developing process of e-learning ALRM subjects through the learning network (*sipejar*) at Arabic Literature Department, Faculty of Letters, Universitas Negeri Malang (ALD FL UM), (b) develop structured assignments and feedback of e-learning ALRM subjects through the *sipejar at* ALD FL UM, (c) develop e-learning ALRM subjects through the *sipejar* at ALD FL UM, (d) develope teaching material tests in the form of multiple choice for e-learning ALRM subjects through the *sipejar* at ALD FL UM, and (e) describe the feasibility of the product in the form of an e-learning independent lecture system through the sipejar at ALD FL UM.

The outputs of this research are (a) e-learning ALRM teaching materials through the *sipejar* is in the form of pdf, PowerPoint, film, and animation, (b) e-learning structured assignments and feedback, (c) conducting test with multiple choices form. The material developed is the material of Research and Development and Classroom Action Research.

2. Literature Review

2.1. Independent Learning

Independent learning is a learning system that emphasizes the independence of individual students to internalize both theoretical and practical teaching materials. The scope of independent learning is not only in independence in internalizing the material, but also independence in terms of willingness, initiative, motivation, and learning strategies. In some writings and in the same perspective, independent learning is referred to as self-directed learning, or self-regulated learning (Trisdiono, 2019).

With regard to the concept of independent learning, (Nagpal and James, 2013) argue, that independent learning is a process, method, and an educational philosophy in which students gain knowledge with their own efforts and develop the ability to critically conduct research and analysis. Independent learning is also related to freedom of choice in setting goals. Nevertheless, independent learning does not mean separating from others, including from the teacher. The effective role of the teacher is still needed for example in having a dialogue with students, providing learning resources, evaluating results, and giving creative ideas (http://azharmind.blogspot.com/2013/07/ajar-mandiri.html#ixzz65UN2WWUg).

Furthermore, Nagpal and James, (2013) state the characteristics of good and creative students as a result of independent learning system, in both practical and intellectual domains as stated in Table 1:

Table-1. The characteristics of good and creative students.

Practical	Intellectual
Increase in students' number in H.E.	Self-learning and active learning skills
Developments in technology and web access	Assuming responsibility for learning in a dynamic approach preventing passivity-"spoon feeding" and empty vessels
Financial pressures on students necessitating part time work	Greater flexibility for lecturers in course developments
Expectations of employers for transferring skills among graduates	Adjustments between school and university for students

Source: Nagpal and James (2013).

2.2. Electronic Learning

The development of science and technology in the digital era is utilized by all fields including education and teaching. One example of utilizing the development of science and technology is on-line learning system (e-learning). Electronic learning is one of the revolutions in the field of education based on internet technology. E-learning is expected to be an alternative for developing a more effective and efficient education system at lower cost in the future (Hartanto and Purbo, 2002).

According to Bonk and Reynolds, in order to promote high-order thinking skills on the Web, online learning must create challenging activities that allow students to apply new information to the old ones; to gain meaningful knowledge; and to use their metacognitive abilities (Khan, 1997). On the other hand, Kozma, argues that special attributes of computers are needed to bring real-life models and simulations to the students; thus, according to Kozma, the media do influence learning system. Kozma claims that it is not the computer that makes students learn, but the design of real-life models and simulations, and the interaction of students with these models and simulations that makes them learn. Computer is only a vehicle that provides capability of processing and delivering instructions to students (Clark, 2001).

E-learning is an internet application that connects between teachers and students in an online learning room. It is created to overcome the limitations between teachers and students, especially in terms of time and space. For using e-learning, teaching and learning process becomes more effective and accelerates the learning process so that all teaching materials can be delivered based on course outline and time allocation. Through e-Learning, students will be more excited in taking the lessons.

Online learning also allows participants to utilize time and space effectively (Cole, 2001). Nevertheless, learning material must be well designed by actively involving students. E-learning which is based on learning system allows students to access teaching materials in a more practical way, from anywhere and anytime. However, learning must keep using good instructional design principles. According to Rossett *et al.* (2002) online learning has many promising purposes, requires commitment and resources, and must be done properly. Ring and Mathieux in Olaniran (2009) suggest that online learning should use high-level strategies (eg students must learn in the context of the workplace), high inter-activities, and high collaboration (Olaniran, 2009).

2.3. Networks Learning Systems

Since 2008, State University of Malang (UM) has had a Learning Management System (LMS) with Platform called Moodle. Moodle is a web-based application program for managing learning. This application allows students to enter digital "classroom" to access learning materials (Cavus and Alhih, 2014); (De Smet *et al.*, 2016b); (Sofia and Diniz, 2014). By using Moodle, lecturers can create learning materials, quizzes, electronic journals and others.

The Moodle Platform can be used for e-Learning or distance learning. With this concept, the teaching and learning system becomes limitless in terms of space and time (Abulibdeh and Hassan, 2011); (Al-Okaily, 2013); (Cavus and Alhih, 2014); (Zacarias *et al.*, 2016). Not only the teacher provides teaching materials from anywhere, also does the student, since he or she can attend classes from anywhere.

Choosing Moodle as a learning platform is the suitability of technical aspects with the needs and characteristics of learning. To put it more simply, it can be stated that, in technical aspects, Moodle allows to conduct the process of test activities or quizzes remotely. A teacher can take exam questions online very easily. Moreover, the process of the test or quiz can be done online so it does not require the presence of participants. Students can take exams at home, at the office, even when traveling with laptop and other gadgets that support internet connections (Praherdhiono *et al.*, 2019).

In terms of technical flexibility, Moodle offers to its users (Herayanti *et al.*, 2015); (Ismanto, 2012)various forms of teaching materials resources as teaching and learning material and writing scripts written from word processing applications, presentation material that comes from various application software and even material in audio and video formats.

The learning system using Moodle can be modified and put together through Single Sign On (SSO) system. In this system, users only need to have one new account to run all activities in the academic system. The SSO has an important role in dividing the right of limitation allowed in using the system. The system is only an implementation of the user's level.

The process of implementing learning using learning network involves activities as shown in Figure 1.

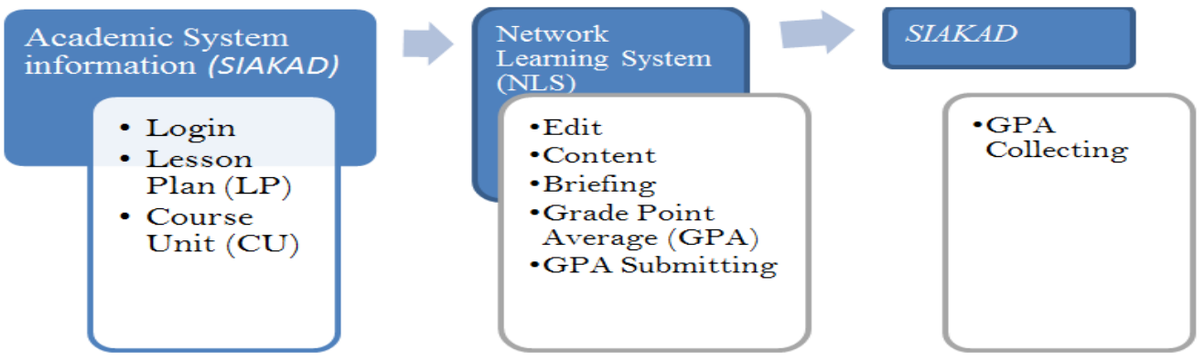

Figure-1. The process of implementing learning using learning network.

Source: Praherdhiono *et al.* (2019).

Activity 1 is Academic System Information or SIAKAD consisting of (1) login, which is the activity of entering the system using Single Sign On, (2) Lesson Plan (LP) development, entering LP developed by lecturers (academic member), and (3) Course Unit (CU) uploading, entering CU from a file to the SIAKAD system.

Activity 2 is an activity done by Network Learning System (NLS) or *SIPEJAR* consisting of (1) Activity focuses on editing the draft of SIPEJAR, (2) Uploading the contents, i.e. activities adding content in learning activities, (3) Briefing Assignment, i.e. lecture/teacher assigns the students to do various activities, (4) Evaluating GPA or Scoring, which is a guidance on how lecturers score the learning activity. (5) GPA submitting, i.e. activity of submitting the score from *SIPEJAR* to SIAKAD in the form of numbers.

Activity 3 is an activity on SIAKAD in the form of inputting GPA as a result of students' achievement or Learning outcomes.

3. Methodology

3.1. Research Design and Procedure

This research used a Research and Development (R&D) approach. It involved first following a research objective of developing an online-based independent lecturing system product of ALRM through the *sipejar*, and second, adapting the development procedure from the procedure proposed by Borg and Gall (1983) which recommends: (1) collecting information in the form of relevant literature reviews and information, (2) making plan which includes determining competencies, goals, learning sequences, and trials, (3) developing initial products, (4) conducting expert tests of initial products, (5) revising product, (6) conducting field test about product feasibility, (7) revising final products, and (8) implementing product (Borg and Gall, 1983).

3.2. Research Subjects

The subjects of this study were Arabic language students who took ALRM as a part of their study curriculum. The data were in the form of both quantitative and qualitative.

3.3. Research Instruments

The instruments used in this study were questionnaires, interview guides, and tests.

3.4. Data Analysis Techniques

Qualitative data analysis techniques were adopted from the interactive model suggested by Mile and Huberman in (Denzin and Lincoln, 2005): (1) data identification, (2) data grouping, (3) data presentation and explanation, and (4) conclusion. To determine the level of product viability and effectiveness, the quantitative criteria are as follows.

Table-2. Criteria of the scoring level.

No.	Average score	Effectiveness level
1	85 to 100	Very effective/very decent
2	75 to 84	Effective/decent
3	60 to 74	Less effective/less decent
4	≤ 59	Very ineffective/very unworthy

Source: Adapted from academic writing guideline of UM 2018-2019.

4. Results

The findings of this research include (a) e-learning ALRM teaching materials through the *sipejar* in the form of pdf, PowerPoint, film, and animation, (b) e-learning structured assignments and feedback, and (c) multiple choice form for test. In such tests where output is e-learning such as ALRM learning material through the *sipejar*, it requires certain stages. These intended stages are (1) reviewing various literature or reference books related to the substance of the research methodology and the concepts and e-learning applications. (2) identifying course topics that are worth discussing in lectures, (3) analyzing the most urgent topics to be presented in an e-learning system, (4) compiling teaching materials draft, (5) developing an e-learning application system through the *sipejar*, (6) testing material and teaching material, (7) revising material and teaching material, (8) testing application system by experts, (9) revising application system based on expert suggestion, (10) conducting field test, (11) revising product, and (12) implementing product.

The results of the expert test on the quality of the textbook content showed that the textbooks were very feasible or very valid (85.25%), while the category of feasibility or validity was 14.75%.The quality of eligibility was seen in various aspects such as clarity of basic competencies, clarity of indicators of achievement of success, level of ease, clarity of language, clutter, conceptual truth, comprehensiveness, contextually, clarity of illustration, and the relevance of material or substance of teaching materials. Meanwhile, the results of the user (student) tests showed that 64.4% were very feasible or very valid, 33.3% were feasible or valid, and 2.2% were less than feasible/less valid. This feasibility is seen from the aspects of practicality, comfort, independence, lack of psychological pressure, creative thinking and the spirit of learning, ease of application, time efficiency, and accuracy of learning. The following is a diagram of the results of material expert test.

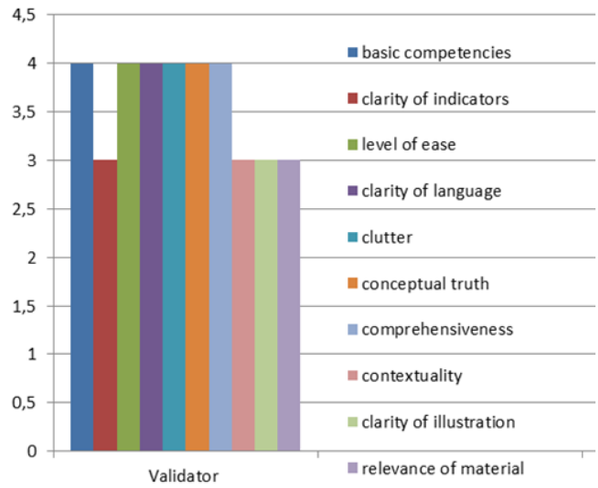

Figure-2. A diagram of the results of material expert test.

The results of the IT expert test showed that teaching material products (textbooks, material for presentation in the form of PowerPoint, film, and animation) developed through a network-based learning system are categorized as very feasible or very valid. Quantitatively, the data showed that the feasibility level reaches 82% (very feasible or valid) and 14% (feasible or valid). The feasibility or validity of the information technology perspective include aspects of background (skins), font size and type, color suitability, suitability of icon selection, practicality of program operation, program menus, ease of interaction with programs, ease of understanding control structures, accuracy of button reactions, and input location button and output.

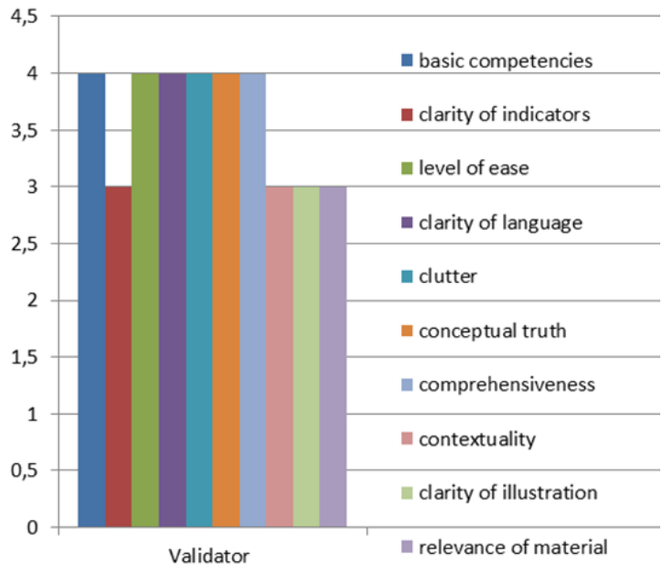

Figure-3. The IT expert test about teaching material products.

The effectiveness of learning outcomes indicates that student learning outcomes obtained through the end of semester exams show the average score of learning outcomes of 80.25. If the mean score of this learning outcome is confirmed by Universitas Negeri Malang's Education Guidebook, the score of this learning outcome is categorized as very satisfying (A-). Thus, the lecture system of e-learning MPBA through *sipejar* is proved to be a very effective learning system.

From the perspective of peculiarities or product characteristics, it was revealed that the e-learning of ALRM subject through *sipejar* had unique characteristics that are different from conventional learning systems. These characteristics include (a) the clarity of learning outcomes reflected in basic competencies and indicators. The clarity of the indicator formulation is reflected in the use of specific, operational, and measurable verbs. (b) the substance of teaching materials that refer to basic competencies and indicators, (c) the validity of the content of the exercise or structure of the tasks and final exam questions and their relevance to basic competencies and indicators, (d) direct linkages between theoretical material and its application in Arabic learning research, (e) flexibility of time and place for learning, (f) fostering self-learning, (g) the absence of psychological pressure, (h) time efficiency of e-learning, (i) students can do self-assessments, (j) the results of the structure assignments can be accessed by students and lecturers, (k) allowing students and lecturers to keep records of feedback, enrichment, and final evaluation, and (l) e-learning system reduces the use of paper.

5. Discussion

The results of this study showed that the development of e-learning independent lecture system of ALRM subjects using *sipejar* was effective. This effectiveness was seen from three aspects: learning outcomes, practicality, and the learning process, including the aspects of learning psychology. E-learning is an internet application that can connect educators and students in an online learning room. E-learning is created to overcome the limitations between educators and students, especially in terms of time and space. The same thing was stated by Hartanto and Purbo that e-learning is one of the revolutions in the field of education. E-learning is expected to be an alternative for developing a more effective and efficient education system at a lower cost in future. Through the e-learning system, the teaching and learning process becomes more effective and accelerates the learning process so that all course material can be delivered in accordance with the semester lecture plan and the time allocation (Hartanto and Purbo, 2002).

The effectiveness of e-learning as revealed in this study is also strengthened by previous research. Xu and Ebojoh's research on the effectiveness of online learning carried out in the College of Graduate Studies, College of Humanities, Social & Behavioral Studies, and College of Health Professions showed that the main benefits of online learning are good and reusable teaching material, integrated learning, flexibility of time and place, cost savings, interactive discussion activities, independent learning, fast feedback, centered learning in students, and the enrichment of teaching materials (Xu and Ebojoh, 2007).

A study carried out by Somayeh, et al regarding a review of the literature showed that the advantages of online-based learning are the existence of an element of learning promotion, independence and satisfaction of individuals in learning, can learn anytime, anywhere and with a variety of existing backgrounds, learning without prerequisites, quick learning process to fit individual needs, can use cooperative learning approaches, saving time and money, learning can be done by everyone, mutual learning, the use of multimedia, reducing environmental pollution and noise. The results of this study indicated the effectiveness of e-learning. Therefore, it is suggested that this approach should be used more in the world of education as a foundation for development (Somayeh *et al.*, 2016).

Other studies that strengthen this study includes that of Hutagalung, Sari & Wasilah whose results showed that the e-learning model in the form of Emodo was very effective to improve the learning outcomes of children's literature for Indonesian Language and Literature Department (Hutagalung et al., 2018). Quantitative data showed that the average learning outcomes before using Emodo 71.2 and the average learning outcomes after using Emodo 87.6 (Lcount = 0.14952> Ltable = 0.886.

Another advantage of e-learning is also based on the principle of flexibility. Learners or students, in this context, can learn anytime and anywhere in accordance with their free time. This is as stated by (Cole, 2001) that online learning allows students to immobilize time and space. This flexibility is also related to the flexibility of the

affection filter to manage input (material) into a competency. That is, students can learn when the affection filter is normal or loose. Psychologically, the looseness of the affection filter gives rise to high motivation and passion for learning. Conversely, if the affection filter is docked, the motivation and passion for learning will be low.

The affective filter hypothesis is one of the theories or hypotheses put forward by Krashen. This theory is related to the acquisition of second language (Krashen, 1985). This theory found that the filter is part of an internal processing system that subconsciously selects or filters the incoming language which psychologists call affection (emotions or feelings) (Dulay *et al.*, 1982). Even though this theory focuses on language acquisition, this is universal whose essence applies to the learning systems in other fields. The question is when the learner's affection filter is low or loose (open) and when the affection filter is high or closed. Affection filters will be in a low position when learners are motivated to learn, healthy, not tired, and not worried. Meanwhile, the affective filter will be in a high position (closed) when the learner is less eager to learn, sick, tired, and anxious.

The following chart illustrates the theory of affection filters from Krashen and Terrell adapted for the lecture system of ALRM (Krashen and Terrell, 1988).

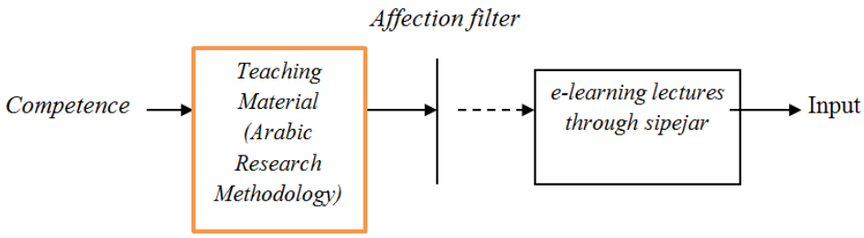

Figure-4. Illustration of the theory of affection filters from Krashen and Terrell.

The illustration above indicates that the input in the form of e-learning lecture system for ALRM Subjects will produce a competency through the process of affection or filter. The question is whether the input in the form of teaching material can automatically be internalized by students as a competency. Certainly it cannot. Teaching material will become a competence when the affection essence at the time of learning is low or open. Conversely, the teaching material will not become a competency when the condition of the affection filter is close together. The e-learning ALRM Subjects through this flexible *sipejar* psychologically can create a condition for student affection filters to be low or loose, so that teaching material is easier to understand.

The effectiveness of the lecture system also cannot be separated from the clarity of the indicators of achievement of success (GPA). The clarity of the GPA is reflected in its operational, specific, and measurable formulation that illustrates the learning achievements which must be mastered by students. The clarity of GPA gives certainty to students about the competency limits that must be mastered in ALRM learning, both theoretical and practical competencies. The clarity of the GPA is also reflected in the structured exercises or assignments and multiple-choice questions. From the aspect of learning strategies, this clear GPA formulation is used as a reference for students to develop their learning systems independently and develop the competencies they should have, so they recognize the limitations of teaching materials that must be mastered. The implication is that they can comprehensively internalize the material as designed in the GPA itself.

The effectiveness of e-leaning systems through s*ipejar* is indeed no doubt empirical. However, the main determining factor is the integrity and commitment of students in independent learning because e-learning is a tool, not a goal. This is consistent with Rossett *et al.* (2002) who state that online learning has many promises but requires commitment and resources, that it must be done properly, it must be designed properly, and students must focus while learning it, and there is adequate support to learn it.

6. Conclusion

This research has successfully created a product for an independent learning system based on online-learning ALRM Subjects. The product is in the form of learning (a) ALRM subjects based on online learning through learning in the form of pdf, PowerPoint, film, and animation, (b) structured assignments and feedback based on online learning, (c) tests in the form of multiple choice. The material developed is the material of Research and Development (R&D) and Classroom Action Research.

The results of this study also show that the ALRM subjects development based on online learning through learning network is very effective both from the quality of the product and from the aspects of the process and learning outcomes. The main factor that causes the effectiveness of this product is the flexibility of time and place which can psychologically create a condition of student affection filters to be low or loose. The relaxation of the affection filter is marked by a sense of pleasure, excitement, and comfort in learning. The implication of this online-based learning system is that teaching materials that are equipped with specific and measurable indicators, assignments and tests are more easily understood by students.

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