

# Evaluation of E-Learning in Indonesian as a Foreign Language

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**Abstract:** Planning, implementing, and evaluating an e-learning program can be a complex task because e-learning involves multiple dimensions and aims to meet the needs of students and e-learning program stakeholders. This study aimed to describe and evaluate the context, input, process, and product of e-learning program. The CIPP Model was used as the evaluation approach to systematically guide the conception, design, implementation, and evaluation of the e-learning program, and provide recommendations of the program's effectiveness for continuous improvement. The data were gathered through interview, observation, and examination of written documents. Content analysis was carried out to analyse the qualitative data. Results of the study indicated that the e-learning program to teach Indonesian as a foreign language needs to be improved in some dimensions. The findings revealed that some improvements in the physical conditions, e-learning artefact, e-learning objects, technology, interface design, and evaluation dimensions of the e-learning program were required to make the program more effective in the future.

## 1 INTRODUCTION

The success of the e-learning program is determined by various interrelated factors. Fitzpatrick (2012) states that there are five key factors of success in e-learning, namely: (1) human issues: the readiness of the instructor and teacher to design e-learning; (2) technical skills: instructor's competence in IT to interact with the learners; (3) technical support: the existence and function of technology to ease access to communicate among the instructors and learners; (4) collaboration: the highest level of readiness among the instructors, learners, and curriculum developer to build communication and collaboration; (5) attitude: strong belief in e-learning manifested in the mindset and positive attitude towards the entire process in the e-learning program.

Other than the five factors mentioned earlier, there are eight dimensions which determine the success of the e-learning program. The eight dimensions include: (1) institutional: this dimension is related to the administrative readiness of the institution in conducting an e-learning program; (2) pedagogical: this dimension covers the learning and teaching process which is supported by curriculum specification which is suitable with the characteristics of e-learning; (3) technology: this

dimension is related to the readiness in terms of technology and its infrastructure to ensure the various forms of communication in e-learning; (4) interface design: this dimension is focused on the synchronous and asynchronous interaction in the learning process; (5) evaluation: this dimension deals with the evaluation process of the learning process and program evaluation; (6) management: this dimension leads to the efficiency and effectiveness in the management and distribution of information; (7) source support, this dimension deals with the availability of various technological sources to ease access of communication among the components of e-learning; and (8) ethics: this dimension covers the learner's socio-cultural context and ethics in using technology (Khan, 2005a; Khan, 2005b; Khan, 2005c).

To find out the level of success of those factors, a systematic program evaluation is called for. Program evaluation is understood as a process to determine the degree of utility of the object being evaluated and to give recommendation to enhance the program (Patton, 2002; Lodico, Spaulding, and Voegtler, 2010). There are several evaluation models which have been used to find out the achievement of an educational program, such as: the Tyler Model, Scriven, PTE Model, decision-making evaluation

approaches, naturalistic evaluation approaches, model Kirkpatrick (Owston, 2008; Fitzpatrick, Sanders, and Worthen, 2012). In this research, one of the decision-making evaluation approaches, i.e. CIPP Model developed by Stufflebeam (2003; 2014), was selected.

The e-learning program chosen as the object of this research is the Indonesian Language e-learning program for Foreign Speakers (in Indonesian, it is called BIPA e-learning) developed by Wisma Bahasa, one of the language training institutions for BIPA in Yogyakarta. The e-learning program in WB is understood as the planned learning experiences using a wide spectrum of technology, especially internet to interact with learners who are separated by time and distance.

This study aimed to describe and evaluate the context, input, process, and product of e-learning program in WB Yogyakarta and provide recommendations of the program's effectiveness for continuous improvement. The framework of this CIPP evaluation model is used systematically to evaluate the planning, implementing and evaluating of e-learning program in WB Yogyakarta in order to improve the program and to provide inputs for the sustainability of the program.

## 2 CIPP EVALUATION MODEL

The model used in this evaluation is the Context, Input, Process, Product Model (CIPP) developed by Stufflebeam (2003). In this model, evaluation is interpreted as a systematic investigation based on certain criteria of the planning stage to the delivery of an innovative program to assess the values, usefulness, and functionality of an object or product of knowledge so that the information obtained in the process helps the decision making (Stufflebeam, Coryn, and Chris, 2014; Joint Committee on Standards for Educational Evaluation, 1994).

The CIPP evaluation model was used by various experts in education. Tiantong and Tongchin (2013) used the website-based collaborative learning model employing Context, Input, Process, Product (CIPP) evaluation model developed by Stufflebeam. The research focused on the learning with multiple intelligences supported by internet-connected devices for collaborative learning. The evaluation coverage was directed to context, input, process and product. The context evaluation covers socio-political investigation, organizational and contextual variables related to the instructional needs using the Internet. The input evaluation was directed to

comparing various input alternatives to fulfill the learners' needs, including website-based instruction. The process evaluation was carried out formatively in the instructional planning, design, development and implementation aspects to improve the process. Meanwhile, the product evaluation was focused on the summative evaluation to assess quality, usefulness, and instructional values of the program.

Studies using Stufflebeam's CIPP model to evaluate curriculum was also conducted by Hakan and Seval (2011). The purpose of this study is to determine the validity and reliability of the evaluation scale developed based on the principles of Stufflebeam's CIPP model in the context of English curriculum evaluation in Yildiz Technical University.

The CIPP evaluation model was also used by Oluwatobi (2015) to evaluate context, input, process, and product in the Postgraduate Program of Babcock University. The results of the study showed that the postgraduate program in Babcock University experienced rapid improvement in terms of learning patterns among the students as indicated by their understanding of the program visions in the research and learning processes.

The important concepts of CIPP Model were context, input, process, and product. The four concepts describe four types of evaluation activities. The context evaluation refers to the activities of problem assessment, needs and its possible emergence in educational program settings. The decision makers used context evaluation to determine the goals and priorities to ensure the attainment of the program objectives. Stakeholders may later use the results of the context evaluation to assess whether the program being implemented is in accordance with the needs and problems that have been determined since the beginning of the program.

The input evaluation refers to the identification and assessment of various approach alternatives used in implementing the program, assessing the procedural planning, budgeting, and staffing provision to match the target needs and outcomes of the objectives. Essentially, input evaluation must involve the identification process of various approaches using various types of instruments and materials to be used in the learning process and to help the decision-makers to prepare the selected approach to be implemented in the learning stage.

Process evaluation refers to monitoring, document evaluation, and activity assessment during the implementation of the program. The activity of the evaluation process includes examining the implementation of the plan and its documentation. In

the process evaluation, the evaluator makes comparison and contrast among the existing activities in the implementation and planning stages, describes the emerging problems during the implementation, and assesses the suitability of the program ranging from planning documents and documenting the implementation.

Meanwhile, the product evaluation was emphasized on testing the impact of the program on the target audience, the quality and importance of outcomes, and how far the program is disseminated. The CIPP evaluation model is a comprehensive evaluation model because the aspects being evaluated include the goal setting, planning, action/process and outcomes (Stufflebeam, 2003).

### 3 METHODS

This research is an evaluation research focusing on the e-learning program evaluation. The program evaluation research is an evaluation design or procedure to gather and analyze data systematically in order to find out the degree of significance or the practical value of the program based on certain standards or criteria.

Research data were obtained from (1) interview, (2) document study, and (3) observation. The interview was conducted with focus group interviews (Lodico, Spaulding, and Voegtler, 2010). Document studies were conducted to determine the quality of lesson plan documents, teaching materials, and assessment instruments uploaded on the BIPA e-learning program website and used by BIPA program developers. Observations were made to collect data accurately and naturally which reflect the reality of the situation as observed by researchers (Lodico, Spaulding, Voegtler, 2010). The Observation Sheet was used to document the learning BIPA e-learning process related to the availability and implementation of planning, learning resources, media, and classroom interactions. In the meantime, field notes contained a variety of information that researchers found during research related to the research problems.

## 4 RESULTS AND DISCUSSION

### 4.1 Context Evaluation

Context evaluation in this BIPA e-learning program is focused on determining the relevant contexts of BIPA learning globally, identifying BIPA learners

with issues related to needs, and settings of learning. In details, there are four main things in the context evaluation, namely: 1) the availability of information on technology-related needs and assets used in e-learning programs, 2) the availability of information from program stakeholders related to the potential problems which need immediate solution, 3) the clarity of program goals and the supporting data which have been adjusted to the needs and potentials of the program benefits, and 4) the availability of such programs of the same type to be used as a reference for the model development being evaluated/benchmarked.

The development of BIPA e-learning program in WB Yogyakarta is done by analyzing the needs of BIPA learners to know the purpose, initial proficiency, choice of topic, choice of strategy, and their technological skills. This needs analysis is done by interviewing and giving a pre-test or placement test. Based on the needs analysis, the instructor develops the material, determines the methods and techniques, the media that suit the needs and conditions of the learners, including developing its systems and assessment instruments.

The results of the needs analysis related to technological assets show that Wisma Bahasa is still in the process of seeking and finding an adequate form of technology to conduct e-learning programs. The multimedia-based computer devices have already installed software such as Skype as the main software to implement e-learning. The software is chosen to ensure that the learning interactivity runs smoothly. The full feature supports in the Skype software facilitate teacher interaction with learners and enable the distribution of learning materials and media. Teachers at Wisma Bahasa optimize desk sharing facilities so that the various materials and media used by teachers can be accessed directly by learners without any difference in formats.

However, there are still some potential problems in the implementation of the e-learning program, namely: 1) the unavailability of technology format that can bring the real-life classroom atmosphere in the e-learning process, 2) the unavailability of adequate class to implement an ideal e-learning classroom (the available classes are too small and not sound-proof), 3) the specific curriculum for e-learning programs has not been systematically arranged, 4) the learners' lack of technology literacy, and 5) internet connection interruption.

The implementation of needs analysis and the technology asset and the identification of potential problems which might arise are necessary to be done to clarify the purpose of BIPA e-learning program,

i.e. to facilitate the BIPA learners who want to study the Indonesian language but cannot come to Indonesia to study through various planned learning experiences using a wide spectrum of technology utilization especially internet to interact and to improve their Indonesian language skills.

The implementation of e-learning in Wisma Bahasa is not specifically based on benchmarking a similar program in certain institutions. Wisma Bahasa tries to develop this program by trial and error to discover the format that suits the institution's capacity.

The needs analysis step is in accordance with the study of Azimi and Rahmani (2013) which affirms that the needs assessment is an important investigative stage that an institution or language training provider must perform to identify the needs and actual gaps of the learners. This strategic step needs to be done to obtain a variety of information about the objectives, content, linguistic background, choice of learning styles, teaching strategies, motivation of learners, outcomes, and also the commitment of learners in following a language program.

WB has a strategic vision for the future in the education and training of Indonesian as a foreign language, namely the internationalization of the Indonesian language through e-learning technology. This provides a strong foundation for the planning and implementation of BIPA e-learning in WB, as well as a reference for the provision of curriculum and learning media associated with it in the context of creating e-learning environments.

## 4.2 Input Evaluation

The focus of input evaluation on BIPA e-learning program in WB capability system and alternative selected program strategy. There are three main objects of the evaluation, namely: 1) the availability of curriculum, syllabus, and materials suit the characteristics of the e-learning program, 2) the clarity of the development strategies of the e-learning program, and 3) the clarity of scheme in new technology utilization in the e-learning program.

Pertaining to the availability of a curriculum, syllabus, and materials, WB is still looking for an appropriate model and its components for the e-learning program. The specific and comprehensive curriculum document is not yet available. The curriculum and syllabus for the e-learning program still use the curriculum for regular programs conducted on-site at WB. Most of the materials,

contents, and media are the same as those provided for onsite learners who take classes at WB. The available syllabi are those developed by the instructors as a follow-up step after conducting learners' needs analysis. These syllabi are used as the basis to facilitate the learners to achieve goals during the e-learning programs. In relevance to the input in the form of curriculum for BIPA e-learning program in WB, there is no document of standard curriculum for e-learning programs.

This strategy developed to achieve the goals of BIPA e-learning program at Wisma Bahasa is to bring the real-life classroom atmosphere using various supporting variables in the BIPA e-learning process. With this strategy, it is expected that learners will feel that they are actually in the classroom to interact with the teachers and/or other learners despite the fact that they interact through the cyberspace.

The strategy adopted is supported by the scheme of utilizing new technology in the e-learning program at WB by installing an e-learning technology software such as Skype and its features. The further projection is to develop the learning management system specifically as it is implemented in the onsite learning, called Sistem Informasi Manajemen Siswa (SIMS). It is expected that the scheme of new technology utilization will further improve the quality of the e-learning programs.

E-learning system with various dimensions and media delivery has been developed in WB since 2009 until now. The principle developed in the BIPA e-learning program in Wisma Language is to present the classroom atmosphere with various supporting variables in the learning process of BIPA in e-learning. Based on this principle, learners are expected to be present in the classroom and interact with teachers and / or other learners even though they interact in the cyberspace.

At this stage also, the interactivity of technology to be used is also identified, especially the capacity of the Internet both in WB and the learners' location. This is done to ensure that the interaction between learners and teachers and with learning resources can take place effectively and efficiently. From this process, some obstacles were encountered related to the learners' varied technological literacy; some learners were less technologically literate, so it took more time to introduce the technology tools and systems implemented in the e-learning program. Another problem that arose was the occasional interruptions of internet connection when the learning process was in progress. This problem was

anticipated through intensifying connection checks before and during the learning process.

To ensure a smooth learning interactivity, WB developed the Skype program by utilizing the share desktop facility in this e-learning program so that the various materials and media used by teachers can be accessed directly by the learners without any difference in formats. This principle is also the basis for the use of a communicative approach in the BIPA teaching and learning process in WB by emphasizing on learner-centered learning with various forms of assistance to help learners use various language skills for several different purposes.

The use of various tools in this e-learning program is in line with Ehler and Hilera (2012) who confirms that e-learning programs must utilize various technologies to support the learning process. It is this technology that connects learners with other learners and diverse learning resources.

### 4.3 Process Evaluation

The basic orientation of the process evaluation of the BIPA e-learning is to identify or predict the impact of procedural design or program implementation, provide information for decision-making related to the learning process, provide affirmations on ongoing learning activities, and assess the continuity of teaching and learning activities. In detail, the process evaluation includes: 1) the clarity of the program management design, 2) the availability and functioning of the e-learning artefacts, 3) the suitability of the e-learning process being implemented with the goals and strategies, 4) the functioning of the supporting technology to facilitate multi-directional interaction, 5) the contribution of e-learning environments in achieving learning objectives, and 6) the creation of the interaction patterns among e-learning environments according to the initial design.

The e-learning program management design in WB is manifested in the package system which must be taken by BIPA learners. The 10-package sessions must be completed within a month so that the institution can monitor the learning progress of the learners to achieve competency. This requirement is applied to meet the minimum standards of program quality.

The program management design is supported by the existence of e-learning supporting artefacts and technology which facilitate the BIPA learners at WB to interact with each other. The BIPA e-learning process in WB is done by real-time and

simultaneous interaction as well as delayed interaction. Real-time and simultaneous interactions are made with Skype programs supported by share desktop programs to facilitate learning to speak, listen, and read. Meanwhile, the delayed interaction method is applied in learning writing as a follow-up of reading lessons done by sending the material and reading material by electronic mail to the learners. Response to written readings is conveyed back to the instructor via e-mail facility to the teacher.

Teachers in the BIPA e-learning program face various dynamics while teaching and interacting with BIPA learners online. As a solution, WB always tries to take advantage of the cutting-edge technological devices to deliver the Indonesian language learning materials and media to learners taking courses from overseas. It is also supported by the teachers' excellent performance that is always adaptive to the development of information technology so that interaction with learners can take place smoothly and effectively.

### 4.4 Product Evaluation

The product evaluation referred to in this study is more on the effort to identify the learning outcomes that are aligned with the goals and needs formulated at the beginning of the program. Evaluation is also done by linking various information on context, input, and process so as to know the quality, usefulness, advantages, and significance of the program to be further processed in order to determine the sustainability of the e-learning program.

From the teacher's perspective, it is revealed that most learners require formal evaluation because they are not bound to complete specific programs in their institution of origin. The evaluation is limited to the provision of feedback at the time of learning without being supported by the documentation of the results of a systematic evaluation. Direct evaluation results are used to refine the learning process by the teacher, such as updating the material, adding the media, or providing corrections on the learners' language problems.

From the perspective of the R & D unit, product evaluation is done by gathering information from learners about their level of satisfaction in joining the e-learning program at WB. From the customer survey forms given to the learners, 85% of learners felt very satisfied with the program and they suggested some ideas to improve the interactivity between teachers and learners in terms of internet connection and the diversity of interactions.

## 5 CONCLUSIONS AND RECOMMENDATIONS

Planning, implementing, and evaluating an e-learning program to teach Indonesian as a foreign language can be a complex task because e-learning involves multiple dimensions and aims to meet the students' needs and e-learning program stakeholders. The eight dimensions of e-learning should be synergized and integrated so that the quality of e-learning environment can be seen in all components and be able to support the learning process effectively (Khan, 2005a; Khan, 2005b; Khan, 2005c).

This study aimed to evaluate the effectiveness of e-learning program to teach Indonesian as a foreign language at WB Yogyakarta through the perspective of instructors/teachers, curriculum designers, IT staff, and R & D unit. The results of the study indicated that the e-learning program to teach Indonesian as a foreign language at WB Yogyakarta needs to be improved in some dimensions of context, input, process, and product. The findings revealed that some improvements in curriculum design, physical conditions, e-learning artefact, e-learning objects, technology, interface design, and evaluation dimensions of the e-learning program were required to make the program more effective in the future. Based on the findings and analysis above, there are some recommendations that researchers proposed to implement the ideal e-learning programs for BIPA in WB.

1. The forms of new technology and e-learning artefacts used in e-learning programs need to be incorporated into e-learning platforms that are specifically developed in accordance with the characteristics and potential of the institutions.
2. Curriculum designers for e-learning programs need to redesign the e-learning environment by integrating the aforementioned e-learning dimensions.
3. Comprehensive and integrated program evaluation is required so that the dimensions of e-learning environments can be seen in the quality and new designs are obtained for the improvement and sustainability of the BIPA e-learning programs.

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