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Evaluating the Bachelor of Education Program Based on the Context, Input, Process, and Product Model

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The study aims to evaluate the Bachelor of Education (BEd) program based on the Context, Input, Process, and Product (CIPP) model. The CIPP paradigm was employed in this study, and data were collected utilizing a questionnaire, an interview guide, and related papers. A quantitative descriptive approach was used to analyze the data. The students, teachers, and top management employees of the polytechnic departments were evaluated. The study was analyzed using SPSS version 15. The descriptive statistics were used to make descriptions related to the respondents' demographic backgrounds and the effectiveness of the BEd program. The prototype verification findings in the Glickman quadrant were used to assess the success of the learning program. According to the results, the execution of the teaching program at the polytechnic is successful considering the interdependence of CIPP. Lesson plan, semester teaching plans, curriculum, infrastructure, and facilities are the limits to the implementation of teaching at the polytechnic. The study concluded that it would be beneficial to the universities in Malaysia in the long-term effort to improve the quality of the program offered and increase the performance and wisdom of the trainers.

Keywords: Bachelor of Education program (PISMP), CIPP assessment model, university–industry, Malaysia, trainers

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INTRODUCTION

The transformation of education suggested by the government through the Malaysian Education Blueprint 2013–2025 proved the concern for the development of the education system for the public (Ministry of Education, 2012). Currently, the world is entering the era of the Fourth Industrial Revolution, in which information technology (IT) has become fundamental in human life. Education plays a significant role as it is only through education that quality and capable human resources are generated or produced in today's time where knowledge and skills learned will affect the environment (Wardina et al., 2019). As an essential part of the educational system, the teaching system needs improvement and development to be carried out by the implementers or stakeholders. The areas that need attention are curriculum development, teaching methods, techniques, materials, and evaluation to yield a future-oriented teaching system (Darma, 2019). The Bachelor of Education (BEd) program at the University of Malaysia has been offered since 1997. The offer includes BEd (Business Management), BEd (Accounting), BEd (Information Technology), BEd (Moral Education), and BEd (Counseling). This university in Malaysia focuses on a continuous effort to enhance students' potential comprehensively. According to a study by Krishnasamy et al. (2015), educationists should try to make students more knowledgeable, educated, competent, impressive, and responsible citizens of the family, society, and country.

Evaluation plays a vital role in teaching. To improve the quality of education, the implementation of assessment should be considered necessary. This process is also essential for the top management (such as principals and department heads), which serves as feedback for the educational or training programs they are responsible for Sawchuk (2015). Furthermore, the evaluation process can spark interest and motivation in students, and they become more severe learners. On the other hand, teachers can improve their teaching methods and professionalism. The evaluation process does not only comprise evaluating learning achievement but also emphasizes evaluating the input and the learning process. When the evaluation of teaching programs takes place, it is expected that the quality of teaching will improve or enhance in the future, and the quality of the education system will become even better (Grissom and Bartanen, 2019).

Mertens and Wilson (2018) suggested three main features to consider while evaluating a program. A program is a systematic inquiry contributing to information about the planner or the foundation-maker. The program evaluation process should be value-oriented, and there should not be a set time to evaluate a specific program. Besides that, program evaluation needs to be done to fulfill the need of the Ministry of Education Malaysia (MOE) so that the curriculum is always inspected to ensure conformity at all times. This is supported by the study of Tractenberg et al. (2020), which states that the curriculum evaluation of any program needs to be conducted from time to time to ensure the delivery of a quality program. Society is now demanding high accountability from educational institutions. Therefore, higher education institutions urge to generate relevant graduates who satisfy the societies and the nation's needs with effective cost and guaranteed quality. These needs alternately change the sudden increase in global knowledge and advancements in science, technology, and education widespread through the electronic networks. As a dynamic institution, the educational institution needs to explore systematically, monitor, and oversee the issue related to planning and executing programs to face this challenge.

Furthermore, Aktaş and Gündoğdu (2020) suggested that learning can become exciting, meaningful, and impactful for the students if the teacher is skillful, knowledgeable, and competent. Huliatunisa et al. (2021) explained that evaluation of programs helps change the education pattern from traditional to contemporary with a change in the role of the learners who were initially only acting as receivers of information. The difference in pattern helps these learners become more active, independent, and passionate in their learning journey. This urged the education system to change the way it delivers knowledge to meet the needs of the current society and business sector.

Some previous studies have focused on the subject of curriculum evaluation using the Context, Input, Process, and Product (CIPP) model (Zhang et al., 2011; Limouei and Hoseinzadeh, 2016; Neyazi et al., 2016; Aziz et al., 2018; Lippe and Carter, 2018). Moreover, the global changes and advancements impact the human profile anticipated to be taught, leading to dramatic changes and developments in the education system, roles, aims of education, and many other sectors, including tourism. As a result, it is vital to regularly examine and improve educational curricula in response to global trends. Evaluation is an important part of education (Vo, 2018). Curriculum review is becoming an increasingly essential aspect of tourist education. The best approach to determine if education programs achieve their goals is to evaluate them (Alqahtani, 2016). However, it is challenging to offer a single approach for curriculum assessment because of diverse curriculum creation (Karatas and Fer, 2009). As a result, it is critical to understand which model to use and how to carry out the educational assessment process systematically.

The primary purpose of the evaluation is to review the conformity, relevance, and effectiveness of the BEd program at the University of Malaysia toward increasing the performance and wisdom of training trainers. This evaluation aimed to ensure that the BEd program at the University of Malaysia is managed efficiently and effectively aligned with the current needs and generate newly trained teachers to fulfill the expectation of schools. This study also aimed to examine the BEd program to ensure that the program offered has an excellent curriculum, meets learners' needs, and realizes the objectives. This study would benefit the university in the long-term effort to improve the quality of the programs offered and increase the performance and wisdom of the trainers.

LITERATURE REVIEW

Evaluation of the Bachelor of Education Program Using the Context, Input, Process, and Product Model

The CIPP evaluation model was developed by Stufflebeam (1971). This model explains that the primary purpose of the evaluation is to obtain valuable information to make decisions. The second purpose is to enable an understanding of the program's strategy. The model's approach is based on two main assumptions. The first assumption is that evaluation plays the main role in stimulating and planning changes, while the second assumption is a complementary element to general institutions' programs (James, 1993).

The CIPP Model is an evaluation model that aims to assess specific programs to enhance the programs, especially the programs offered in education and human resources. According to Nikijuluw (2020), CIPP is a model of evaluation that acts as a tool to assist in forming a customized program that could benefit the people of an organization. The model has four different areas of assessment such as contextual evaluation, input, products, and process. Using these four areas, evaluation of a program can be conducted easily. The selection of a specific evaluation area depends upon the program's goals and objectives.

Context Evaluation

Context evaluation helps to evaluate the needs and opportunities in a specific context or environment. The objective is to recognize, define, and address the needs of the target population. The different ways and methods used in this type of evaluation include surveys, data analyses, interviews, and document reviews

(Toosi et al., 2021). Below are some questions that contextual evaluation deals with:

Q1. Does the school have substantial aims or not?
Q2. Are the objectives extracted from the aims?
Q3. Are the courses being taught relevant to the aims?
Q4. Is the school able to fulfill the social needs or not?

Input Evaluation

Input evaluation focuses on the content and the issues related to the evaluation of textbooks. Stufflebeam and Shinkfield (2007) mentioned that input evaluation helps determine the project to be identified and overcome the need. Therefore, the primary approach is to identify and evaluate the current ability of the ongoing system that suggests suitable alternative strategies. The input evaluation assists researchers in planning decisions, locating available resources, finding alternative ways to be taken, planning strategies to achieve the objective, and designing the working procedure to achieve it. Warr et al. (1970) explained input evaluation as overseeing the use of resources to execute the training program. The objective of input evaluation is to provide ease in implementing the program planned in the context stage. Moreover, it focuses on specific resources such as financial resources, human resources, policies, educational strategies, limitations, and hurdles of the education system (Saif, 2019).

Process Evaluation

Evaluation of the process focuses on the teaching method and considers the involvement between the instructor and the process. Evaluation is an observation process of program execution assisting in preparing the main reference list for continuous observation. This process aims to obtain feedback on the progression and procedure of executing the program and controlling and fixing the plan. Worthen and Sanders (1987) explained that process evaluation emphasizes three objectives: detecting or predicting the procedure design or the execution of the program at the implementation level, supplying information on the result of the program, and maintaining the procedure record has been implemented.

Process evaluation covers data collection that has been decided and implemented in the program execution. Ultimately, process evaluation is done to measure the progress and determine which components need to be focused on. It refers to identifying or estimating performance problems that occur during educational activities and defining the attractiveness of the implementation process. This process discusses the effect of the educational program on the learners (Saif, 2019).

Product Evaluation

Evaluation of product is an assessment done to observe the achievement obtained from the planned execution of the program. Product evaluations identify and evaluate the result of the program as to whether it is a success or not. The objective of product evaluation is to measure, interpret, and assess the outcome with honesty. Product evaluation observes whether the need is fulfilled or needs improvisation (Stufflebeam and Shinkfield, 2007). Stufflebeam (2008) explained that product evaluation gives project directors or teachers a chance to make decisions on specific programs. Product evaluation can provide information to educators or administrators to make decisions on the effectiveness of the implemented program. Farida (2000) stated that product evaluation could assist in making decisions on obtained outcomes and long-term planning. Therefore, it can be concluded that product evaluation can see the effectiveness of any program as to whether it has achieved the main objective or otherwise. At this level, the evaluator can contribute suggestions or recommendations for improvement.

Context, Input, Process, and Product evaluation evaluates multiple education programs while preparing for better education development (Zhang et al., 2008, 2009). Felix (1979) used the CIPP model to evaluate and improve the instruction system in schools in the region of Cincinnati. The development faculty have also utilized the CIPP model to support medical students' teaching and learning professionalism in the United States (Steinert et al., 2005). An important objective of evaluation based on the CIPP model is to bring improvisation to the program's performance. The CIPP model of evaluation is a cyclical process that focuses on the process more as compared to the product, and it is regarded as a fundamental goal of the evaluation process. The purpose of it is to improve the curriculum of the educational program. Studies have shown that the CIPP evaluation model covers all the stages of reviewing an educational program. It provides the required information needed to bring about a constructive improvement in the educational programs and make informed decisions. The model not only focuses on providing answers to clear questions but also emphasizes the systematic and general determination of the competencies of an educational program (Toosi et al., 2021).

Several local researchers also used the CIPP model to evaluate the effectiveness of teaching and learning. Ahamad and Sidek (2009) researched to assess the implementation of the curriculum for the Lower Form History subject using the CIPP evaluation model. The research sample consisted of 147 teachers and 1441 students of lower forms in secondary schools. This research used a survey as the research instrument to assess input, process, and product. The study's outcome showed that teachers' perception of the constructs of knowledge pedagogy, facilities, teaching, and learning plan was moderate, while the mean score for curriculum observation was at the lowest level. With this, it can be concluded that the CIPP model is crucially needed and can become a guideline for researchers to evaluate any program. Through this model, researchers can identify the strengths and weaknesses of a program and bring significant improvements to it.

OPERATIONAL DEFINITIONS OF VARIABLES USED

Lecturer and Facilities

The variable lecturer and facilities refer to the teaching and learning competencies of the lecturer and the facilities of the BEd program provided to ease the process of teaching.

Relevance and Conformity of Bachelor of Education Program

The relevance and conformity of the BEd program refer to a program that offers an excellent curriculum, fulfills learners' demands, can realize the objectives, and has wide marketing possibilities as there is progress in the education field.

Effectiveness of the Bachelor of Education Program

The program's effectiveness refers to the effectiveness of the BEd program in the form of execution strategy, program outcome, and its impact on the organization.

MATERIALS AND METHODS

Study Design

The study has used the CIPP model to conduct evaluation research in Malaysia from 2020 to 2021.

Population and Sampling

This study has considered 520 BEd students from a Malaysian university (**Table 1**). A study by Krejcie and Morgan (1970) proposed a table Sample Size Determination. In this study, about 350 BEd students were chosen as the research sample because the increase in sample size can help to reduce error when the sample does not represent or has the characteristics of the population. Non-proportionate stratified sampling based on the program of study and simple random sampling were used to select the research sample.

Study Instrument

A survey questionnaire was used as the main instrument in this study. However, the instrument used in this study was adapted from previous research. The information was gathered using context, input, process, and product instruments having high levels of validity and reliability. The lowest degree of content validity for each instrument was 0.91, while the maximum level was 0.94.

TABLE 1 | Demographic details.

Variable	Frequency	%
Gender		
Men	42	19.2
Women	177	80.2
Program of study		
BEd (BA)	62	28.3
BEd (ACCT)	25	11.4
BEd (IT)	51	23.3
BEd (Moral Education)	36	16.4
BEd (Counseling)	45	20.5

Data Analysis

The researchers checked the responses obtained from the BEd students through the questionnaires and analyzed them using the SPSS version 15, Malaysia. In this study, descriptive statistics like percentage, mean, and frequency were used to describe the respondents' demographic backgrounds and the effectiveness of the BEd program. The collected data were quantitatively-descriptively assessed as follows: T-score = 50 + 10Z. The data from each variable's analysis result was compared to the true mean. They were then divided into five groups using the ideal normal curve theoretic norm based on their propensity, as follows:

- Very high – $Mi + 1.5\ SDi < x \leq Mi + 3SDi$
- High – $Mi + 0.5\ SDi < x \leq Mi + 1.5\ SDi$
- Medium – $Mi - 0.5\ SDi < x \leq Mi + 0.5\ SDi$
- Low – $Mi - 1.5\ SDi < x \leq Mi - 0.5\ SDi$
- Very low – $Mi - 3\ SDi < x \leq Mi - 1.5\ SDi$

The percentage of accomplishment was used to classify the efficacy of program implementation in each dimension. The categorization criteria are based on the hierarchy shown below (Ebel and Frisbie, 1972):

- Very high – A = (81–100)%
- High – B = (61–80)%
- Fair – C = (41–60)%
- Low – D = (21–40)%
- Very low – E = (0–20)%

The T-score determines each component's qualification. For instance, it is positive (+) if the T-score is >50 and negative (−) if the T-score is <50. The number of negative (−) and positive (+) scores are computed to find out the result of each component. The result is positive if the number of the positive scores is more or the same as that of the negative scores and *vice versa*.

RESULTS AND DISCUSSION

Table 2 shows that the number of female respondents is more significant (80.2%) compared to male respondents (19.2%). In terms of the programs of study, the result showed that BEd (BA) had the highest number of participants in this study and BEd (ACCT) had the lowest percentage (11.4%).

Table 3 shows the descriptive analysis of the effectiveness of the BEd program with a mean value of 4.12 and a SD of 1.03.

The T-score findings are reported in **Table 3**. According to **Table 3**, all context variables' components have positive (+) ratings. It demonstrates that the indicators covering the teaching strategy, vision and missions, and the educational experience have satisfied expectations. The difference between

TABLE 2 | Effectiveness of the Bachelor of Education program.

Variable	Mean	SD
Effectiveness of Bachelor of Education program	4.12	1.03

TABLE 3 | *T*-score analysis of the context variable component.

Component	Frequency category			Conclusion
	Σf (+)	Σf (–)	Σf (+) %	
Teaching strategy	105	55	51.53	Positive (+)
Mission and vision	78	72	50.64	Positive (+)
Educational experience	82	68	53.05	Positive (+)
Total				Positive (+) Effective

TABLE 4 | *T*-score analysis of the input variable component.

Component	Frequency category			Conclusion
	Σf (+)	Σf (–)	Σf (+) %	
Syllabus	72	78	47.16	Negative (–)
Quarterly teaching plan	71	80	46.08	Negative (–)
Infrastructure	70	81	45.40	Negative (–)
Human resource	80	71	51.21	Positive (+)
Total				Negative (–) Less effective

TABLE 5 | *T*-score analysis of the process variable component.

Component	Frequency category			Conclusion
	Σf (+)	Σf (–)	Σf (+) %	
Constituents	81	70	52.37	Positive (+)
Learning approaches	109	62	57.61	Positive (+)
Assessment	72	78	47.5	Negative (–)
Total				Positive (+) Effective enough

TABLE 6 | *T*-score analysis of the product variable component.

Component	Frequency category			Conclusion
	Σf (+)	Σf (–)	Σf (+) %	
Intellectual	135	180	42.21	Negative (–)
Non-intellectual	155	169	48.15	Negative (–)
Total				Negative (–) Ineffective

the positive (+) and negative (−) scores, the vision and missions, and the educational experience is positive (+). There is a correspondence between reality and theory. As a result, the context variable has aided in implementing the educational program. The teaching strategy, vision and missions, and the educational experience contribute considerably to the teaching program's implementation. The building model adhered to the teaching strategy's concepts, aims, and functions. The success of the teaching program execution is influenced by an adequate and effective teaching plan (Majid, 2012).

According to **Table 4**, the input components, including the syllabus, quarterly teaching plan, and infrastructure, all receive bad marks. However, human resource components receive high marks. Not all of the input variable's indications match the expectation. The syllabus components, quarterly teaching plan, and infrastructure have not exceeded expectations, although all study programs have a lesson plan for all courses. Furthermore, there is no guidance on how to construct the syllabus, and the assertions of attainment of learning accomplishment do not always relate to the statement of the graduate's standard competencies required in the national higher education standard. The quarterly teaching plans developed by the lecturers do not fulfill the national norm of higher education.

The process of evaluation includes the teaching constituents, learning approaches, and assessments. **Table 5** presents the *T*-score analysis of the process variable components (constituents, learning approaches) that yield a positive score. However, the assessment component yields a negative score. The constituents and learning approaches fulfilled expectations and helped to increase the process variable. However, the assessment component did not meet expectations and contributed less adequately to the process variable. Assessments occur apart from the instructional activities, notably in the middle and at the end of the semester. Assessment is an essential component of the educational process and should be implemented and carried out in tandem with it.

According to **Table 6**, all of the product's components receive a poor score. In general, product variables do not facilitate teaching in Malaysia. Intellectual and non-intellectual components did not meet expectations and contributed much less to the product variable. The goal of the teaching program has not been met optimally. According to Yusuf (2017), product assessment occurs at the end of an activity and is designed to measure the success of previously defined objectives based on a standard or criterion. This conclusion is backed by the idea that the final evaluation (product) links information about the end achievement to the objectives, context, input, and procedure executed before it (Warju, 2016).

One of the significant issues confronting theorists and people interested in educational systems is the assessment of educational programs. It is critical to pay attention to the quality of successful training that follows it in today's environment. The study aimed to evaluate the BEd programs through the CIPP model. The factors such as lecturer and facilities, relevance and conformity of the BEd program were handled collectively in multiple regression. The result of the analysis showed that the independent variable is the indicator and is significant to the effectiveness of the BEd program. The context and the process possess strong backing. However, products and input have poor support. It validates the findings of Gunung and Darma (2018), who concluded that the execution of the teaching program is adequate in terms of context, input, process, and output. It also supports the findings of Riptiani et al. (2015) and Kavgaoglu and Alci (2016), stating that the efficacy of each setting, input, process, and product determines the level of effectiveness of the program under consideration.

The assessment results show that the context in program evaluation might alter the implementation and achievement processes of the program's objectives. Management effectiveness focuses on the expected outcomes, objectives, and aims. A competent institution of higher education measures its success in terms of input, process, context, and result and is distinguished based on the high quality of the system constituents. The CIPP assessment approach views the program as a system. Integrating educational experience, input, and process both supports and impacts the result or output. The amount of efficacy of each component determines the program's effectiveness. The existence of limitations in each component will affect the program's effectiveness. As a result of the presence of limits in the components of context, input, and product, the degree of effectiveness of the educational program is adequate in Malaysia.

The relevance and conformity of the BEd program have a significant influence on the high coefficient value compared to lecturers and facilities. This shows that the variable of relevance and conformity of the BEd program has the most potent effect on the effectiveness of the BEd program. The outcome of the current study is in line with the study of Harun (2014), who discovered that the factor of relevance and conformity is the main factor in selecting any program. Their research outcome showed that students tend to choose courses and academic programs that have high quality and relevance to the current need and could secure jobs.

The planning of the instructional program has to be much improved. The teaching strategy serves as a reference for lecturers in creating more directed instructional activities that will proceed smoothly and effectively. Therefore, improving teaching quality may begin with the teaching plan (Dwiyogo, 2018). According to Işman (2011), designing a teaching program is important in increasing teaching quality. Its layout must be focused on active learning. A mature strategy determines the effectiveness of a teaching process. When a plan is well-crafted, half of the battle is won; the rest is in the execution.

Besides that, lecturers and facilities are the second-highest variance contributor and a significant indicator that affects the effectiveness of the BEd program. This study outcome is aligned with the outcome of the study of Ibrahim and Amin (2017), who discovered that the factor of teaching and facilities needed more attention in the offering of any academic program. They stated that the main aspect that needed to be emphasized are enhancing lecturers' quality, improving educational technology facilities, improving library facilities, and ensuring the academic curriculum is aligned with the needs of the schools. A similar study assessed the efficiency of the Ankara University Preparatory School curriculum from the viewpoints of instructors and students (Tunc, 2010). The findings suggested that adjustments in the program's physical circumstances, content, materials, and evaluation were necessary to make it more effective.

The lecturers and facilities and the relevance and appropriateness of the BEd program variables become significant predictors with the highest coefficient value. Therefore, these factors need to be emphasized in implementing the BEd program to create an effective BEd program. This outcome clearly states that the effectiveness of the BEd program depends on the factor of lecturer and facilities and the relevance and conformity of the BEd program. Both factors are interrelated and need to be taken into consideration to ensure that the BEd program has the quality and can help increase its effectiveness.

Another study used the CIPP assessment model as a complete framework to guide the development, planning, implementation, and evaluation of a revamped undergraduate medical education program (Mirzazadeh et al., 2016). The findings of this study demonstrated that the components of the CIPP assessment model could successfully handle all stages of the reform even when the new program was still in development. The present study used context and input assessment before and process and product evaluation after the new program's introduction (Mirzazadeh et al., 2016). Attempts to modify or reform various elements and a continuous examination of the program and its certification appear to be essential. The integrated curriculum is a well-known idea across the world. The goal of the study by Rooholamini et al. (2017) was to collect the data needed for the program assessment of this curriculum for undergraduate medical students utilizing the CIPP program evaluation paradigm. The fundamental benefit of reviewing an educational program using the CIPP assessment paradigm is that the program's context, input, process, and product are all seen and evaluated systematically. This will assist educational authorities in making appropriate decisions on the program's continuation, discontinuation, and adjustment based on the program's faults and strengths.

This study has shown that lecturers, facilities, and relevance and conformity of the BEd program variables become the predictors of the significance of the effectiveness of the BEd program. Both the variables have a significant and positive impact on the dependent variable. The study has also shown that the BEd program offered is relevant and suits the students' needs, equips the lecturers with expertise, and provides excellent facilities. This study outcome indicated that the offering of the BEd program with Honors meets the expectations and demands of both the private and public organizations. The offer of the BEd program is in line with the aim of the Ministry of Education Malaysia (MOE), which always demands trained teachers in the field of education. The expectation by MOE is to produce more trained teachers to handle the attitude problems of students as well as give guidance and advice on learning, career, and student development. Having sound knowledge and competent educators are needed to realize the mission, and the BEd program with Honors can become the platform to train these educators.

STUDY IMPLICATIONS

This study has several implications for the authorities based on the discussion and explanation that are involved in implementing the BEd program:

- This research proved that implementing the BEd program depends on the lecturers and facilities and the relevance and conformity of the BEd program variables. The study discovered that the variables of lecturers and facilities and

relevance and conformity of the BEd program have a significant and positive influence on the effectiveness of the BEd program. Therefore, it can be concluded that the implementation of BEd needs to focus on lecturers and facilities and the relevance and conformity of the BEd program variables as the enhancement of these variables affects the effectiveness of the BEd program.

- This research outcome has explained that the relevance and conformity of the BEd program variable significantly influence the effectiveness. The outcome has indicated that university authorities need to ensure that the BEd program implemented is relevant and suits the need of the educational undergraduates. This explains that the BEd program that is offered meets the demand of the current market and industries.
- The Ministry of Higher Education of Malaysia and the university need to pay full attention to ensuring the quality of lecturers and facilities, the relevance and conformity of the BEd program, and the effectiveness of the implementation. The ministry and the university need to form an organizational structure and come up with management principles that can overcome the change in circumstances and the need of the educational institution in the long term. It soon will help the ministry and the university improve and construct capable, knowledgeable, and competent graduates and increase the quality of the program offered.
- The decision-makers need to review the implemented curriculum, especially concerning the statement of learning achievement, and encourage the lecturers to prepare printed learning materials according to the student's learning needs.
- There is also a need to adapt strategies and activities in the teaching plan that has been written.

CONCLUSION

The study aimed to evaluate the BEd program using the CIPP model. The training program considered in this study is sufficient in terms of the interconnectedness of context, input, process, and result components. The context, input, process, and result components are the restrictions in instructional implementation. The teaching strategy is the context variable. The curriculum, quarterly teaching plan, and infrastructure are the input variables. The assessment system is the process variable. The quality of academic and non-academic learning success is the product variable. As a result, the study suggests that improving the quality of the curriculum given and increasing the performance and knowledge of the trainers will be helpful to the institutions in Malaysia in the long run.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

AUTHOR CONTRIBUTIONS

SS: conception, editing, analysis, correspondence, literature and methods. NS: drafting and analysis. Both authors contributed to the article and approved the submitted version.

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REFERENCES

Ahamad, R., and Sidek, S. (2009). *Pelaksanaan Kurikulum Sejarah Menengah Rendah di Malaysia- Suatu Penilaian*. Putrajaya: Institut Pendidikan Guru Kampus Sultan Mizan.

Aktaş, C. K., and Gündoğdu, K. (2020). An extensive evaluation study of the English preparatory curriculum of a foreign language school. *Pegem Eğitim Öğretim Dergisi* 10, 169–214. doi: 10.14527/pegegog.2020.007

Alqahtani, K. (2016). Decision oriented evaluation: a review of various models of evaluation. *Int. J. Sci. Eng. Res.* 7, 929–931.

Aziz, S., Mahmood, M., and Rehman, Z. (2018). Implementation of CIPP model for quality evaluation at school level: a case study. *J. Educ. Educ. Dev.* 5, 189–206. doi: 10.22555/joeed.v5i1.1553

Darma, I. K. (2019). The effectiveness of teaching program of CIPP evaluation model. *Int. Res. J. Eng. IT Sci. Res.* 5, 1–13. doi: 10.21744/irjeis.v5n3.619

Dwiyogo, W. D. (2018). *Blended Learning Based Learning*. Depok: PT Rajagrafindo Persada.

Ebel, R. L., and Frisbie, D. A. (1972). *Essentials of Educational Measurement*. Englewood Cliffs, NJ: Prentice-Hall.

Farida, Y. T. (2000). *Evaluasi Program*. Jakarta: Rineka Cipta.

Felix, J. L. (1979). Research and evaluation to improve instruction: the Cincinnati strategy. *Educ. Eval. Policy Anal.* 1, 57–62. doi: 10.3102/01623737001002057

Grissom, J. A., and Bartanen, B. (2019). Strategic retention: principal effectiveness and teacher turnover in multiple-measure teacher evaluation systems. *Am. Educ. Res. J.* 56, 514–555. doi: 10.3102/0002831218797931

Gunung, I. N., and Darma, I. K. (2018). "Evaluation of learning programs at Bali State Polytechnic (BSP)," in *Proceedings of the International Conference on Science and Technology (ICST 2018)*, South Portland, ME. doi: 10.2991/icst-18.2018.228

Harun, M. H. (2014). *Laporan Kajian Penilaian Program IPTA: Keberkesanan dan Kerelevanan dari Aspek Penawaran dan Permintaan (Kluster Teknikal)*. Putrajaya: Fakulti Kejuruteraan.

Huliatunisa, Y., Suhardan, D., Rasyid, S., and Sabban, I. (2021). "Evaluation of the Quality of Education Services," in *Proceedings of the 4th International Conference on Research of Educational Administration and Management*, Amsterdam. doi: 10.2991/assehr.k.210212.071

Ibrahim, M. Y., and Amin, A. (2017). Model kepemimpinan pengajaran pengetua dan kompetensi pengajaran guru. *JUKU: J. Kurik. Pengajaran Asia Pas.* 2, 11–25.

Işman, A. (2011). Instructional design in education: new model. *TOJET: Turk. Online J. Educ. Technol.* 10, 136–142.

James, W. (1993). *Educational Evaluation*. Boston, MA: Allyn and Bacon.

Karatas, H., and Fer, S. (2009). Evaluation of English curriculum at Yildiz Technical University using CIPP model. *Egitim Bilim* 34, 47–60.

Kavgaoglu, D., and Alci, B. (2016). Application of context input process and product model in curriculum evaluation: case study of a call centre. *Educ. Res. Rev.* 11, 1659–1669. doi: 10.5897/ERR2016.2911

Krejcie, R. V., and Morgan, D. W. (1970). Determining sample size for research activities. *Educ. Psychol. Measure.* 30, 607–610. doi: 10.1177/001316447003000308

Krishnasamy, H. N., Veloo, A., and Ali, R. (2015). Teachers' readiness and issues in the implementation of school-based assessment. *Int. Educ. Stud.* 8:193. doi: 10.5539/ies.v8n11p193

Limouei, F., and Hoseinzadeh, O. A. (2016). An internal evaluation of educational groups in dentistry faculty of tabriz medical university using CIPP model in 2015. *Int. J. Med. Res. Health Sci.* 5, 571–579.

Lippe, M., and Carter, P. (2018). Using the CIPP model to assess nursing education program quality and merit. *Teach. Learn. Nurs.* 13, 9–13. doi: 10.1016/j.teln.2017.09.008

Majid, A. (2012). *Perencanaan Pembelajaran Bandung*. Kota Bandung: PT Remaja Rosdakarya.

Mertens, D. M., and Wilson, A. T. (2018). *Program Evaluation Theory and Practice*. New York, NY: Guilford Publications.

Mirzazadeh, A., Gandomkar, R., Hejri, S. M., Hassanzadeh, G., Koochak, H. E., Golestani, A., et al. (2016). Undergraduate medical education programme renewal: a longitudinal context, input, process and product evaluation study. *Perspect. Med. Educ.* 5, 15–23. doi: 10.1007/s40037-015-0243-3

Neyazi, N., Arab, M., Farzianpour, F., and Majdabadi, M. M. (2016). Evaluation of selected faculties at Tehran University of Medical Sciences using CIPP model in students and graduates point of view. *Eval. Program Plan.* 59, 88–93. doi: 10.1016/j.evalprogplan.2016.06.013

Nikijuluw, R. C. (2020). The use of CIPP in the extensive listening course at PSDKU Program. *KOLI J.* 1, 116–123.

Riptiani, K. M., Manuaba, I. B. S., and Putra, M. (2015). The evaluation study on the implementation of the 2013 Curriculum was reviewed from CIPP in public elementary schools in rural areas of Badung Regency. *PGSD Undiksha Pulpit* 3,

Rooholamini, A., Amini, M., Bazrafkan, L., Dehghani, M. R., Esmaeilzadeh, Z., Nabeiei, P., et al. (2017). Program evaluation of an integrated basic science medical curriculum in Shiraz Medical School, using the CIPP evaluation model. *J. Adv. Med. Educ. Prof.* 5, 148–154.

Saif, A. A. (2019). *Educational Measurement, Assessment and Evaluation*, Seventh Edition New York, NY: Doran publication.

Sawchuk, S. (2015). Teacher evaluation: an issue overview. *Educ. Week* 35, 1–6.

Steinert, Y., Cruess, S., Cruess, R., and Snell, L. (2005). Faculty development for teaching and evaluating professionalism: from programme design to curriculum change. *Med. Educ.* 39, 127–136. doi: 10.1111/j.1365-2929.2004.02069.x

Stufflebeam, D., and Shinkfield, A. (2007). *Evaluation, Theory, Models and Applications*. San Francisco, CA: Jossey-Bass.

Stufflebeam, D. L. (1971). The relevance of the CIPP evaluation model for educational accountability. *J. Res. Dev. Educ.* 5, 19–25. doi: 10.1007/978-94-010-0309-4_4

Stufflebeam, D. L. (2008). Egon Guba's conceptual journey to constructivist evaluation: a tribute. *Qual. Inq.* 14, 1386–1400. doi: 10.1177/1077800408325308

Toosi, M., Modarres, M., Amini, M., and Geranmayeh, M. (2021). Context, Input, Process, and Product Evaluation Model in medical education: a systematic review. *J. Educ. Health Promot.* 10:199.

Tractenberg, R. E., Lindvall, J. M., Attwood, T., and Via, A. (2020). Guidelines for curriculum and course development in higher education and training. *SocArXiv* [Preprint]. doi: 10.31235/osf.io/7qeht

Tunc, F. (2010). *Evaluation of an English Language Teaching Program at a Public University Using CIPP Model.* Master's thesis. Ankara: Middle East Technical University.

Vo, T. K. A. (2018). Evaluation models in educational program: strengths and weaknesses. *VNU J. Foreign Stud.* 34, 140–150. doi: 10.25073/2525-2445/vnufs.4252

Wardina, U. V., Jalinus, N., and Asnur, L. (2019). Vocational education curriculum in the industrial revolution Era 4.0. *J. Educ.* 20, 82–90. doi: 10.33830/jp.v20i1.240.2019

Warju, W. (2016). Educational program evaluation using CIPP Model. *Innovat. Vocat. Technol. Educ.* 12, 36–42. doi: 10.17509/invotec.v12i1.4502

Warr, P., Bird, M., and Rackham, N. (1970). *Evaluation of Management Training*. London: Gower Press.

Worthen, B. R., and Sanders, J. R. (1987). *Educational Evaluation*. New York, NY: Longman.

Yusuf, A. M. (2017). *Educational Assessment and Evaluation*. Jakarta: Prenada Media.

Zhang, G., Griffith, R., Metcalf, D., Zeller, N., Misulis, K., Shea, D., et al. (2009). Assessing service and learning of a service-learning program in Teacher education using mixed-methods research. *Paper presented at the American Education Research Association Annual Conference*, San Diego, CA.

Zhang, G., Zeller, N., Griffith, R., Metcalf, D., Williams, J., Shea, C., et al. (2011). Using the context, input, process, and product evaluation model (CIPP) as a comprehensive framework to guide the planning, implementation, and assessment of service-learning programs. *J. High. Educ. Outreach Engage.* 15, 57–84.

Zhang, G., Zeller, N., Shea, C., Griffith, R., Metcalf, D., Misulis, K., et al. (2008). A 360° assessment of the multidimensional effects of a service-learning program in teacher education using mixed-methods research. *Paper presented at the 8th International Research Conference on Service-Learning and Community Engagement*, New Orleans, LA.

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