JURNAL PENGAJIAN ISLAM

Jurnal Pengajian Islam
ISSN: 1823 7126
E-ISSSN: 0127-8002
2024, Bilangan 17, Isu I, Halaman 41-51

Penilaian Keberkesanan Kursus Etika Dan Tamadun Berdasarkan Model Cipp: Analisis Faktor Eksploratori

Evaluation Of The Effectiveness Of The Ethics & Civilization Course Based On The Cipp Model: An Exploratory Factor Analysis

Musaiyadah Ahmadun[1*], Muzalifah Monil[2], Nur ilma Ambo[3], Masnih Mustapa[4], Sharifah Sari Datu Asal[5], Siti Nurhafizan Panglima[6]

[1]Akademi Pengajian Islam Kontemporari, Universiti Teknologi Mara (UiTM), Cawangan Sabahmusaiyadah@uitm.edu.my.
[2] Fakulti Pengurusan Perniagaan, Universiti Teknologi Mara (UiTM), Cawangan Sabah
[3] Pensyarah, Universiti Malaysia Sabah. nurilma@ums.edu.my
[4] Akademi Pengajian Islam Kontemporari, Universiti Teknologi Mara (UiTM), Cawangan Sabah
[5] Akademi Pengajian Islam Kontemporari, Universiti Teknologi Mara (UiTM), Cawangan Sabah
[6] Pensyarah, Universiti Malaysia Sabah. hafizanpanglima@ums.edu.my

* Penulis Penghubung

Artikel diterima: 02 Jan 2024 | *Selepas Pembetulan: 30 April 2024* | *Diterima untuk terbit: 27 Mei 2024*

Abstrak

Penilaian adalah prosedur pengumpulan data yang komprehensif yang menyediakan penilaian awal terhadap keberkesanan sesuatu program atau kurikulum. Oleh itu, tujuan kajian ini adalah untuk menilai kecekapan kursus etika dan tamadun bagi pelajar UiTM cawangan Kota Kinabalu Sabah menggunakan model CIPP. Kajian ini sepenuhnya bersifat kuantitatif, melibatkan metodologi tinjauan dan prosedur soal selidik. Sebagai responden, 150 pelajar dari kursus etika dan tamadun telah mengambil bahagian. Kebolehpercayaan Cronbach's Alpha dan Analisis Faktor Eksploratori (EFA) digunakan untuk menilai data secara deskriptif. Oleh kerana adanya outlier dalam analisis normaliti, tiga responden telah dikeluarkan daripada kajian ini. Cronbach's Alpha ialah 0.952, yang mana melebihi 0.70 hasil daripada nilai normaliti yang dicapai. Sementara itu, hasil Analisis Faktor Eksploratori (EFA) menunjukkan empat faktor dengan nilai Eigen melebihi 1.0 dan nilai KMO (Kaiser-Meyer-Olkin) sebanyak 0.942 ≥ 0.6, menunjukkan bahawa item pemboleh ubah dalam penilaian kecekapan kursus etika dan tamadun adalah saling berkorelasi. Kami mengenal pasti faktor baru yang mempengaruhi penilaian kecekapan kursus etika dan tamadun hasil daripada ujian analisis faktor eksploratori (EFA). Selepas itu, ujian Bartlett adalah signifikan (Chi Square 6745.895, $p < 0.05$). Kajian ini tidak termasuk sebarang pengecualian, dan semua nilai faktor pemuatan didapati lebih besar daripada 0.05. Oleh itu, keseluruhan penemuan menunjukkan bahawa item-item untuk menilai kursus etika dan tamadun boleh diukur dan menjawab objektif kajian. Sebanyak 45 item telah disahkan dan sesuai untuk mengukur kejayaan kursus etika dan tamadun berasaskan CIPP.

Kata Kunci:

Etika, Tamadun, Keberkesanan, Analisis Faktor Eksploratori (EFA)

Abstract

Evaluation is a comprehensive data collection procedure that provides an initial assessment of the effectiveness of a program or curriculum. As a result, the purpose of this study is to examine the efficiency of the ethics and civilization course for UiTM Kota Kinabalu Sabah branch students using the CIPP model. This study is entirely quantitative, involving survey methodologies and questionnaire procedures. As respondents, 150 students from ethics and civilization courses participated. Cronbach's Alpha reliability and Exploratory Factor Analysis were used to assess the data descriptively (EFA). Since of outliers in the normalcy analysis, three respondents were eliminated from this study. Cronbach's Alpha is 0.952, which is above 0.70 as a result of the achieved normality value. Meanwhile, the Exploratory Factor Analysis (EFA) results show four factors with Elgen values in excess of 1.0 and KMO values (Kaiser-Meyer-Olkin) of 0.942 ≥ 0.6, indicating that variable items in the evaluation of the efficiency of the ethics and civilization course are intercorrelated. We identified a new factor that influences the evaluation of the efficiency of the ethics and civilization course as a result of the exploratory factor analysis (EFA) test. Following that, the Bartlett test is significant (Chi Square 6745.895, $p < 0.05$). This study included no exclusions, and all loading factor values were found to be greater than 0.05. As a result, the overall findings suggest that the items for evaluating ethics and civilization courses may be measured and answered the study's objectives. A total of 45 items have been validated and are suitable for measuring the success of CIPP-based ethics and civilization courses.

Keyword
Ethics, Civilization, Effectiveness, Exploratory Factor Analysis (EFA

1. Introduction

The CIPP evaluation model stands for context evaluation, input evaluation, process evaluation and product evaluation (evaluation of the result or outcome). Daniel Stufflebeam established the CIPP evaluation model at Ohio University, and it is frequently used to assess the efficiency of a training program in educational institutions. According to Stufflebeam (1983), the CIPP method was developed to evaluate and improve a curriculum. This demonstrates the importance of implementing the CIPP model as a benchmark for program success in order to enhance the program.

Stufflebeam developed the CIPP model, which contains four essential components: context, input, process, and product. Context assessment assesses needs, issues, resources, and potential opportunities to assist decision makers in determining objectives and priorities, as well as to assist implementers in evaluating goals, priorities, and results (FillellaGuin and Blanch-Plana, 2002; Stufflebeam and Shinkfied, 2007; Karim, 2021). Contextual assessment is aligned to curriculum goals. Evaluating needs, problems, and opportunities aids in determining a program's goals and outcomes (Stufflubeam et al., 2003; Mahmud, 2015).

Being a new course at the university, evaluation is essential for making sure that the Ethics and Civilization course is implemented in line with the objectives and goals set by the Malaysian Department of Higher Education. Evaluations are crucial not only after the program has been implemented, but also throughout the implementation process (Bulhayat, 2019). Therefore, this study was carried out to assess the efficiency of the Ethics and Civilization course on UiTM Kota Kinabalu Branch students in Sabah using the CIPP model.

2. **Context Evaluation**

Context evaluation is the process of explaining and detailing the environment, needs, population, sample provided, and project objectives. In other words, context is the situation or background that influences a program's strategy and objectives. More precisely, Stufflebeam et al., 2003; Shinkfield and Stufflebeam, 1985; Nurul Anriani et al., 2021 explain that context assessment is used to examine the overall status of the object, identify strengths and weaknesses that can be applied to improve the program environment.

Mukhlis & Siam, 2021; Nurul Anriani et al., 2021 define context evaluation as "the examination of whether the present aims and priorities are in line with anyone's needs." Based on this information, context evaluation tries to examine the overall status of the item, identify weaknesses and strengths, diagnose problems, and give solutions, while also evaluating whether goals and priorities are suited to the needs to be implemented. When studying and evaluating the context of a curriculum, several questions should be considered, including whether the learning goals are appropriate, whether the learning objectives achieve the goals, whether the courses taught are in line with the goals, and whether the university meets social needs.

3. **Input Evaluation**

Input evaluation is the second component of the KIPP model for assessing a program's ability to achieve its objectives and goals. Input is related to accessible learning resources and serves as a starting point for implementing a defined curriculum (Alwen Bentri, 2017). Input evaluation seeks to assess the strategies and resources available for use in the curriculum implementation process; it also seeks to analyze and evaluate a program's activities, strategies, and procedures to determine whether they meet the objectives of the goals that have been established or not. It also controls and improves curriculum development (Shinkfield & Stufflebeam, 1985). Input has a significant impact on the success of curriculum creation; thus, evaluating the input itself is required to assess the quality of the input (Alwen Bentri, 2017). Ad hoc and microanalytical input evaluation is sometimes known as two-level evaluation (Ornstein and Hunkins, 1988; Alwen Bentri, 2017).

4. **Process Evaluation**

Process monitoring, also known as process evaluation, is a program implementation procedure that serves as a crucial reference list for continuous monitoring. This information must be known over time to govern the program's implementation (Azizi, 2001). According to Stufflebeam and Shinkfield (2007), the major purpose of process assessment applied to a program is to determine how far the intended actions can be carried out and whether adjustments or amendments to the action plan are made. While Worthen and Sanders (1981) evaluate this process for three major purposes: detecting and forecasting the design or execution of procedures, giving information for program decisions, and maintaining records of procedures as they occur.

5. **Product Evaluation**

Product evaluation aims to determine the achievement of curriculum objectives in a learning environment. The assessment of predicted and unexpected consequences is emphasized in product evaluation. Product evaluation, according to Stuffubeam et al. (2003), is carried out by considering four major aspects: impact, effectiveness, sustainability, and usability. Throughout the product assessment process, instruments

such as tests, interviews, and observations are used to observe and analyze behavioral changes that occur following the adoption of a learning curriculum. As a result, various topics relating to student accomplishment, practicality, recording of student activities, improving instructor quality, and school reputation are considered crucial for product evaluation (Shamsa Aziz et al., 2018). Overall, the primary purpose of product evaluation is to determine student success and achievement in a program (Scriven, 1994).

6. Methodology

Quantitative study used with 150 students from UiTM Sabah's sabah taking ethics and civilization courses as a sample size. According to Hair et al. (2018), minimum number of 100 samples required for statistical analysis tests, or 5 or 20 times per rate number of variables. As a result, this study exert random sampling to select respondents, and each group has an equal chance of being chosen. Based on CIPP model, the study questionnaire has 51 items categorized into four assessment constructs: context evaluation, input evaluation, process evaluation, and product evaluation. Questionnaires used as data collection technique to gather responses from respondents cause as an efficient procedure, information is easily obtained, and data may be generated based on the group of research questions that need to be answered (Creswell, 2014).

This study adapts and modifies instruments from previous research (Karatas Hakan & Fer Seval, 2011; Shamsa Aziz et al., 2018; Noor Qamaria & Fanni, 2019; Vo Thi & Vincent, 2021; Ahmad Bashri et al., 2020). As shown in Table 1, the questionnaire set includes of 51 items designed to assess the CIPP model's components. Each item scored on 5-point Likert scale, and the data is analyzed with the Statistical Package for the Social Sciences (SPSS) version 22.

Table 1

Division by Construction

Section	construct/sub construct	Number of item
A	Student demographics	6
B	context	9
C	Input	9
D	Process	13
E	Product	14
	Number of item	51

7. Findings

The estimation of normality carried out before analyzing data to determine whether the obtained data normally distributed. As data of 150 respondents results indicate the regularly distributed based on skewness and kurtosis. Skewness normally distributed, where the highest study for skewness -1.4 and for kurtosis 1.6 which data considered as normal if the skewness (Skewness) ranges from - 2 to +2 and the kurtosis ranges from -7 to +7 (Hair et al., 2018).

Meanwhile, Cronbach's alpha used to assess the construct reliability of the questionnaire. Cronbach's alpha reported in the range of 0.7 (> 0.7), indicate the instrument's construct has high construct value (Norzalina et al., 2021; Hair et al.,

2018). The table 2 shows the interpretation of Cronbach's alpha as suggested by Kline (2011).

Table 2
Reliability value of each construct

Construct	Item	Cronbach Alpha
Context	9	0.91
Input Evaluation	9	0.924
Process Evaluation	13	0.959
Product Evaluation	14	0.952

Norzalina et al., (2021) state Kaiser-Meyer-Olkin (KMO) and Bartlett's Test aim to determine multicollinearity and correlation, i.e., the same value exists between two or more items to measure the same aspect and whether there is correlation between items. As a result, the factor analysis of the study's findings was determined to be appropriate because the KMO value was greater than 0.50. The KMO value in this study specify data does not have a significant multicollinearity problem, indicating the items are suitable for factor analysis. The Bartlett's Test results considered significant if the value of p 0.05, with a Chi-square value of 6745.895 at 990 degrees of freedom. The results of the KMO and Bartlett's test show the data can be extend using exploratory factor analysis (EFA).

Table 3
Kaiser-Meyer-Olkin (KMO) sample adequacy test and Bartlett's Test Of Sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.942
Bartlett's Test of Sphericity	Approx. Chi-Square	6745.895
	df	990
	Sig.	0.000

This study's factor analysis used an eigenvalue of 1. The number of explained variations then automatically categorized every question into five constructs, indicating one additional construct in addition to the four existing constructs in the questionnaire. Table 4 shows five factors based on Eigen values greater than one that emerged from the EFA procedure. The variance explained to measure this construct is 70.39%, which is acceptable and appropriate because it exceeds the 60% threshold established by Wahab & Noor Jeffri (2022; Hair, 2018).

EFA required when the instrument self-constructed, modified, or translated into another language (Awang, 2015). As a result, EFA analysis should be conducted for this study to determine the weighting factor of each item. The sample size for EFA should be at least 100 respondents, (Habsah et al., 2018). Thus, the weighing factor less than 0.3 (0.3) removed, the weighting factor (>0.4) remains. According to Samuels (2017), a weighting factor greater than 0.4 is stable for factor analysis analysis.

Table 4: ***Factor Analysis (EFA) CIPP Model***

	Contecs	**Input**	**Process**	**Product**	**New Construct**
Lecturers assist students in comprehending the course material.	0.789				
Every assignment receives feedback by the lecturer.	0.776				
The lecturers who offer this course are quite knowledgeable about the subject matter.	0.772				
Lecturers deliver lectures in accordance with the teaching and learning plan.	0.751				
The evaluation procedures outlined in this course are followed by lecturers.	0.739				
The lecturer explains the course content.	0.733				
The lecturer conducts this course using a variety of interesting approaches.	0.705				
Lecturers continually monitor students' knowledge and skills development.	0.704				
During the course, the lecturer uses the facilitation method.	0.697				
Lecturers provide an environment in which students can ask questions and share their viewpoints.	0.685				
This course is often taught by lecturers.	0.682				

The lecturer's method of delivery really proves interesting.	0.672				
Checklists are applied by lecturers to evaluate students' knowledge and skills.	0.655				
Lecturers complete their allocated lecture hours.	0.619				
This course can be completed in an appropriate duration of time.	0.594				
Throughout the teaching and learning process, lecturers and students use two-way communication.	0.584				
The lecturer allowed me to engage in conversation about topics and assist other students with their assignments.	0.541				
This course increased my knowledge.		0.73			
The lecturers are friendly and pleasant to interact with.		0.719			
The lecturer has a high level of professionalism.		0.712			
This course was enjoyable to learn.		0.691			
Lecturers are easily accessible for discussion.		0.69			
I believe the course has improved my life.		0.682			
This course is extremely important to me.		0.643			
Through this course, I was able to comprehend prior experiences.		0.621			
After taking this course, I feel a strong feeling of patriotism towards my nation.		0.597			
This course has given me more confidence.		0.492			
This course can help students understand the			0.623		

ethics and civilization of a multicultural society.					
This course implements high-impact educational practises.			0.609		
This course's syllabus is based on nationality, civilization, and ethics.			0.608		
This course increases students' affection for their nation.			0.607		
This course aligns with the university's vision and objective.			0.583		
Learning and teaching are supported by space equipment.			0.575		
Teaching aids are sufficient.			0.57		
This course's completion focuses on appreciation and civilization in the Malaysian mould.			0.55		
Saya digalakkan menggunakan kreativiti dan inovasi dalam penghasilan tugasan.			0.548		
The content of ethics and civilization subjects is simple.			0.524		
This subject assists students understand their demands on society.			0.453		
This course's material is relevant to my subject of study.				0.764	
University students may enrol in this relevant course.				0.649	
This course complies with industry and government standards.				0.61	
After taking this course, I believe I have improved my skills.					0.749
Following this course, I believe I became more creative and innovative.					0.67

This course enabled me to create a variety of presentations and findings.					0.482

A common matrix with varimax rotation (rotated component matrix) is used to show the correlation between the items with the factor showing all of the items from the CIPP model's four constructs, which are context evaluation, input evaluation, process evaluation, and product evaluation, and it is discovered that a new construct exists from the question items investigated. This construct's sections can be classified as creative constructs, with objects under this new construct containing elements of creativity, invention, and talent.

In various constructions, numerous components have varying weighting factors. For instance, the item of "The lecturer completes the scheduled teaching hours." has two different construct and weighting factors, which construct one weighting factor of 0.619 and construct three weighting value of 0.5. If this occurs, the construct category will be assigned a higher weight. There are 17 items in this study with two constructs and various weighting variables.

At the end of this model, we additionally discover three items that are not part of the CIPP model. Items from this construct can be classified as a new construct called "creativity construct," which has elements of creativity, invention, and skill. Nowadays, creativity and innovation crucial in the teaching and learning of knowledge. It's consist with our new concept of creativity and innovation being critical in sustaining the CIPP model.

8. Conclusion

Exploratory factor analysis (EFA) purposely to enable more accurate and meaningful evaluation of the CIPP model constructs. This study used four evaluation items based on the CIPP model, namely from the perspectives of context evaluation, input evaluation, process evaluation, and product evaluation. As a result, it's essential to modify the existing instrument by adapt the EFA which all of the elements involved are relevant based on the criteria that have been defined. Previous research demonstrated CIPP evaluation model has four components, but the findings of the exploratory factor analysis (EFA) necessitate the inclusion of a new factor that is creative elements, innovation, and talents. As a result, the introduction of additional constructions has the potential to improve the CIPP model in the future.

Thus, the Cronbach's alpha (α) coefficient value of this questionnaire instrument higher than it should be (Hair et al., 2018), demonstrate the suitable for use in the future research. It recommend the future studies apply combination of confirmatory factor analysis and SEM modeling in order to create a SEM model that matches the data collected. Furthermore, future studies could potentially be improved by integrating qualitative and mixed-methods research. Finally, the CIPP model examined using exploratory factor analysis (EFA) indicated that all of the questionnaire items are reliable and appropriate for inclusion in the analysis.

9.0 References

A.C Ornstein dan F.P Hunkins, (1988), Curriculum: Foundations, Principles and Issues, Prentice Hall: New Jersey Englewood Cliffs.

Bashri A., Prastiwi, S,M., & Praspuwati, P, R., (2020), CIPP Model for Curiculum Evaluation of Biology Education, Advances in Social Science, Education and Humanities Research 491, 1247-1251. https://www.atlantis-press.com/proceedings/ijcah-20/125947250

Bentri, A., (2017), Evaluation Input of Early Childhood Teacher Education Curriculum Faculty of Education Universitas Negeri Padang, Advances in Social Science, Education and Humanities Research (ASSEHR) 169, International Conference of Early Childhood Education, 131-133. https://www.atlantis-press.com/proceedings/icece-17/25889751

Awang, Z. (2015). SEM Made Simple: A Gentle Approach to Learning Structural Equation Modelling. Bandar Baru Bangi, MPWS Rich Resources.

Yahaya, A,. (2001), Penggunaan Model Kontek. Input, Proses dan Produk (KIPP) dalamPenilaian Program Pembelajaran. Sejauh Manakah ia Relev an?, International Conference on Challenges and Prospects in Teacher Education, Concorde Hotel Shah Alam. 16 & 17 July 2001. http://eprints.utm.my/id/eprint/2241/1/puitm.pdf

Creswell, J. W. (2014). Research Design: Qualitative, Quantitative and Mixed Methods Approaches (4th ed.). Thousand Oaks, CA: Sage.

Filella-Guin, G., & Blanch-Plana, A. (2002). Imprisonment and career development: An evaluation of a guidance program for job finding, Journal of Career Development, 29(1), 55-68. https://www.researchgate.net/publication/241652672_Imprisonment_and_Career_Development_An_Evaluation_of_a_Guidance_Programme_for_Job_Finding

Muda, H., Lognathan,N., Awang, Z., Jusoh, H., & baba,S,Z., (2018). Application of Theory, Methodology and Analsis in Condusting Research: A Practical guide to Quantitative Research and Thesis Writing. Penerbitan. Penerbit Unisza. ISBN:978- 967-2231-11-0.

Hair, J.F., Bbin, B. J., Anderson, R. E., & Black, W. C., (2018) Multivariate Data Analysis;8th edition. Cengage ISBN: 9781473756540 .

Hair, J.F., Hult, G.T.M., Ringle, C.M. & Sarstedt, M. (2018). A Primer on Partial LeastSquares Structural Equation Modeling (PLS-SEM). Second Edition. Los Angeles. Sage.

Karatas Hakan & Fer Seval (2011), CIPP Evaluation Model Scale: Development, Reliability and Validity, Procedia Social and Behaviorial Sciences 15, 592-599. https://www.sciencedirect.com/science/article/pii/S1877042811003259

Mohammad, k., (2021). Program Evaluation: An Analysis of Context, Input, Process and Product (CIPP) Model. Faculty Member of Bangladesh Public Administration Training Centre, Savar, Dhaka. https://www.researchgate.net/publication/352462214_Programme_Evaluation_An_Analysis_of_Context_Input_Process_and_Product_CIPP_Model

Kline, R. B. (2011). Principles and practice of structural equation modelling (3th ed.).The Guilford Press.

Mahmud, Alias. (2015). Penggunaan Model Cipp Dalam Penilaian Kurikulum Separa Perubatan. Prosiding Seminar Penyelidikan Pendidikan dan Pembangunan Sumber Manusia (PPPSM 2013), 28-29 Februari 2012, Universiti Putra Malaysia.

https://www.researchgate.net/publication/285421654_Penggunaan_Model_Cipp_Dalam_Penilaian_Kurikulum_Separa_PerubataN

Agustina, Q, N., & Mukhtaruddin, F., (2019), The CIPP Model-Based Evaluation on Integrated English Learning (IEL) Program at Language Center English Language, Teaching Educational Journal (ELTEJ) 2 (1), 22-31. http://journal2.uad.ac.id/index.php/eltej/article/view/1043

Noor, N., Beram, S., & Janan, D. (2021), Penerokaan & Pengesahan Instrumen Penerimaan Aplikasi Flipgrid Berdasarkan Modifikasi Model Tam Dalam Pembentangan Video Pelajar: Analisis Faktor Penerokaan (EFA). JuKu: Jurnal Kurikulum & Pengajaran Asia Pasifik, 9(2), 1-11. https://ejournal.um.edu.my/index.php/JUKU/article/view/29936/13026

Anriani,N., Hidayat, S., Mantin, R., (2021). Context, Input, Process, And Product (CIPP) Model Program Evaluation with A Management Approach At National Research Agency Education And Training Center. Natural Volatiles and Essential Oils.

Samuels, P. (2017) Advice on Exploratory Factor Analysis. Technical Report. ResearchGate, 9/06/2017Sudalyo, R. A. T. (2021). Pengaruh Lingkungan Kerja dan Komitmen Organisasional Terhadap Kinerja Karyawan Radio Swasta di Surakarta: Kepuasan Kerja Sebagai Variabel Intervening. Jurnal Sosial Teknologi, 1(11), 1-444.

Scriven, M. (1994). Product evaluation: The state of the art. Evaluation Practice, 15(1), 45-62.

Shamsa Aziz, Munazza Mahmood, Zahra Rehman. (2018). Implementation of CIPP Model for Quality Evaluation at School Level: A Case Study. Journal of Education and Educational Development 5 (1), 189-206.

Shinkfield, A. J., and D. L. Stufflebeam (1985), Systematic Evaluation, San Francisco, CA: Jossey-Bass.

Stufflebeam, D. L., & Shinkfield, A. J. (2007). Evaluation theory, models, & applications. San Francisco, CA: Jossey-Bass.

Stufflebeam, D. L., Herold & Beulah, M. K. (1983). The CIPP Model for Eval uation, In: Evaluation Models, Evaluation in Education and Human Services, 117-141.

Stufflebeam, D. L., & Shinkfield, A. J. (2007), “Evaluation Theory, Models, And Applications”, San Francisco, CA: Jossey-Bass.

Vo Thi Kim Anh & Vincent Pang (2021), The Application of CIPP Model To Evaluate Online Teaching For English Majored Programs in Vietnam During the Covid-19 Pandemic, JIRSEA 19 (2), 146-310.

Wahab, N. J. A. (2022). Penggunaan Analisis Faktor Penerokaan (EFA) Bagi Pengujian Kesahan Instrumen Perkongsian Pengetahuan. *Jurnal ILMI*, *12*(1), 127-133.

Worthen, B.R. & Sanders, J.R. (1987), Educational Evaluation: Alternative Approaches And Practical Guidelines, New York: Longman.