Yudi Pratama, Sariyatun, Hermanu Joebagio (2017). The development of Means-Ends Analysis and Value Clarification Technique Integration Model to explore the local Wisdom in Historical Learning. *Journal of Education and Learning*. Vol. 11 (2) pp. 179-187. DOI: 10.11591/edulearn.v11i2.5752

The development of Means-Ends Analysis and Value Clarification Technique Integration Model to explore the local Wisdom in Historical Learning

Yudi Pratama* Faculty of Education, Sebelas Maret University

Sariyatun**
Faculty of Education, Sebelas Maret University

Hermanu Joebagio***
Faculty of Education, Sebelas Maret University

Abstract

Nowadays social conflict still occurs frequently on the behalf of ethnicity, race, and religion in Indonesia; it is because there is still identity crisis. Essentially, difference is this nation's identity, one form of which is local wisdom containing values that can be integrated into learning process. Therefore, an appropriate learning model is required in implementing the local wisdom values in particularly in history learning process. This study was a research and development using Dick and Carey model. Considering the result of validation and tryout, it could be concluded that *Means-Ends Analysis* model collaborated with *Value Clarification Technique* could help the students identify the local wisdom values.

Keywords: Means-Ends Analysis, Value Clarification Technique, local wisdom,

^{*}Yudi Pratama S.Pd, Post Graduate Program of History Education E-mail: pratamayudi993@gmail.com

^{**} Prof.Dr.Sariyatun, M.Pd,M.Hum, Chairperson of Historical Postgraduate Study Program, Professor and Lecturer in Historical Education Postgraduate Program of Sebelas Maret University.

E-mail: Sari_fkip_uns@yahoo.co.id

^{***} Prof.Dr.Hermanu Joebagio,M.Pd. Professor and Lecturer in Historical Education Postgraduate Program of Sebelas Maret University.

E-mail: hermanu.Joebagio@gmail.com

Introduction

Indonesia is a very diverse nation with local wisdom and it is a potency of dealing with the crisis of identity befalling this country. Each of local wisdom has typical characteristic and distinctive peculiarity, and it contains values. The local wisdom diversity existing in Indonesia is a capital to confirm the nation's identity; the role of local wisdom itself, as aforementioned, is unique and reflects on each individual's identity. However, in reality, the difference now becomes the root of prolonged social conflict in Indonesia. The role of local wisdom as an identity should be to determine the plural society's mindset; if everyone realizes that diversity has been born because since a long time ago we are created differently and should be complementary each other and it should not generate ethnicity that in turn results in conflict.

Ridwan (in Khusniati, 2014: 68) says that local wisdom or local genius can be conceived as human being's attempt of using his mind (cognition) to act on and to treat an object or event occurring in certain space. Etymologically, it can also be conceived as an individual's ability of using his mind and thinking in acting on or treating as the assessment of an object or something occurring.

Speaking of Local Wisdom in Indonesia is to speak of the term "religiosity" as well. It is inseparable from Plural Society concept. Therefore, a new paradigm is required concerning How to apply Local Wisdom-Based Education in Indonesian Education System, particularly in History subject. Local wisdom is related to *Indigenous knowledge*, the knowledge or richness and culture in certain community that is always and has been developed over times and develops and changes continuously. Four indicators can be used to investigate local wisdom; it is the vocabulary of knowledge based on local knowledge, changing over times, living and known in certain community environment and ever changing and dynamic in nature (Amirrachman, 2007: 328). Local wisdom can be conceived as human being's attempt of using his mind (cognition) to act on and to treat something, object or event occurring in certain space. This definition is organized as an etymology, in which Wisdom is defined as an individual's ability of using his mind and thinking in acting on or treating as the result of assessment on something, object or event occurring. As a term, wisdom is often defined as *kearifan* in Indonesian (Ridwan in Haryanto, 2014: 4)

Learning about local wisdom is to learn Culture; learning through culture is a method giving the students the opportunity of showing the achievement of understanding or meaning created in a subject through various forms of culture. Learning through culture is a form of *Multiple Representation of Learning Assessment* or a form of Understanding Assessment in many forms. Ruyadi (2010) states that local cultural wisdom-based character education model is an attempt of putting the philosophical basics of genuine education, that education is inseparable from its community and culture. A genuine education serves to build individual character in order to be consistent with his cultural values. Therefore, there should be encouragement to return to the meaning, essence and philosophy of national education wishing education to be based on religion values and national culture (Daryanto and Rahardjo, 2012: 165).

One attempt of implementing local wisdom values is to integrate it into History learning, despite its limited scope, considering that in the current national curriculums, either KTSP or 2013 curriculum, there is still a difficulty of including local wisdom into it. It seems that the syllabus of learning is still limited to world and national histories only; it also affects the students' learning interest, with the composition of learning material positioning so that it is unsurprising that learning process becomes boring and not innovative because there is no means for the teacher to develop a material of locality. Essentially, it is dependent on how teacher innovates with the existing material, but once again, limited source becomes the constraint. Therefore, there should be a specific strategy to implement the locality material element in learning process (Pratama, 2016:7).

The problem arises when the history teacher finds difficulty in including local wisdom values into learning material so that the message does not reach the students; the combination of MEA and VCT models become one solution to this problem, in which MEA serves as the medium of exploring the values existing in local wisdom and VCT as the medium of clarifying those values.

Literature Review

MEA (Means-Ends Analysis)

Newell and Simon (1972) state that Means-Ends Analysis strategy is originally used as the strategy of solving problem. Just like in mathematics, engineering and computer program fields requiring accurate calculation, MEA is also used as a means of clarifying an individual's idea when working on mathematical authentication. Thus, problem solving should be done very precisely.

The application of Means-Ends Analysis strategy as a learning model is one of appropriate solution to problem solving method. MEA (Means-Ends Analysis) model is one solution to the need for innovative learning model currently, combined with value approach expected to help the teachers of history subject particularly in learning process. In the context of problem solving, this model is effective to internalize the values existing in local wisdom.

Referring to Huda (2014:296), the adapted syntax of learning model is as follows:

- 1) Teacher presents the problem with heuristic-based approach; in the context of history, the heuristic phase can be defined as the stage of gathering historical sources (Daliman, 2012:51),
- 2) The students elaborate the conditions or requirements needed to achieve the ultimate goal (end state).
- 3) The students divide the problems the teacher has given into sub-problems.
- 4) The students identify the difference based on sub-problems existing.
- 5) The students analyze the appropriate strategy to solve problems in order to achieve the specified outcome.
- 6) The students select the as solving as possible strategy to achieve the end state, to solve the problem.

VCT (Value Clarification Technique)

Toyibin and Kosasih (in Haris, 2013: 2) state that VCT is a label for a teaching-learning approach or strategy for values and moral approach or affective education; VCT was used firstly in learning by Louis Raths in 1950s when he was teaching in *New York University*, VCT is the teaching technique to help the students in looking for and determining a value considered as good in dealing with a problem through a process of analyzing values preexisting and embedded into students (Nunuk, 2013:2).

In addition, the main objective of value approach is to generate the change in attitude based on what obtained from learning by interpreting the meaning of what has been learnt, such as the meaning of local wisdom values. The first thing to do is to select and to choose the option independently after analyzing and considering its consequence to the value chosen, and then appreciating in the sense of loving and being proud of the values chosen and showing that the values are the part of them and the latter is the end state of all value approaches and learning process is the concrete realization of the chosen values applied to daily routines.

There are three processes: selecting, appreciating/upholding, and acting on, and these processes are then subdivided into seven sub-processes: (1) selecting independently, (2) selecting from some alternatives, (3) selecting from some alternative after considering its various consequences, (4) appreciating and feeling happy with the choice, (5) willing to acknowledge/confirm the choice before the public, (6) behaving corresponding to the choice, and (7) acting on repeatedly corresponding to the choice in turn making it the lifestyle (Adisusilo, 2011:147).

Research Methods

This study was a Research and Development. Overall, this research was divided into three main steps: *firstly*, analyzing the integration of local wisdom value material into History learning material; *secondly*, describing the development process consisting of expert validation and trying out the combination of MEA and VCT models, and identifying and clarifying the values existing in local wisdom; and *thirdly*, evaluating the model, that is, revising the model that has undertaken expert validation and tryout.

This research was conducted from August to September 2016. The subject of research consisted of students and History teacher in SMA 1 Simpang of Ogan Komering Ulu Selatan Regency with four Social Science grades containing 120 students. The 11th Social Science 2 and the 11th Social Science 3 grades are intended to Small and large scale tryouts, respectively, and the other two grades to prior observation classes. Meanwhile, instrument validation was carried out by Education expects. Technique of collecting data used was student assessment sheet instrument, and the data obtained was analyzed statistically and descriptively.

Result and Discussion

The analysis of the integration of local wisdom values into History Learning Material

From the result of preliminary study, the following conclusions can be drawn on how the history learning process runs in SMA 1 Simpang:

- 1) Learning process is still conventional; teacher has indeed applied the learning model but it cannot be conducted duly; in addition no value approach is combined with learning model so that it is difficult to integrate the local wisdom values into learning model.
- 2) The learning is passive in nature, in which teacher still dominates the learning process or the learning is still teacher-oriented; thus, considering the problem encountered, the students still tend to find difficulty in solving the complex problem thereby disabling the students to coordinate well with each other.
- 3) The students' understanding on local history and culture is still very inadequate.
- 4) The source is limited and the reference to local material source is inadequate.
- 5) The scope of material about local wisdom is still limited in history learning.

The major problem encountered in the development of local history is the availability of sources. The writing in local history events has not widely available. It becomes a constraint in learning local history. The constraints in the teaching of local history are time and cost. Due to the lack of source, it takes time and money that need enough attention of the local history teacher (Djono: 2015). The limited source becomes a problem and constraint in implementing the material of local history in history learning at school. The role of teachers is very important as they are required to be able of obtaining new learning source regarding local material and to take attempt of preserving the culture. Thus, the material obtained will be internalized later into the character of students.

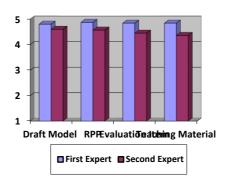
Model Development and Implementation

Considering the result of preliminary study analysis, the framework of development design is adapted from Dick and Carey's model to be used as the parameter of successful development. Learning strategy and design, according to Dick and Carey, is the general components of a learning material containing the procedure to be used in the learning not only limited to procedure or learning activity stage only but also including the regulation of material and learning program package to be delivered to the students (Dick and Carey, 1996:183). Dick and Carey's model design has 10 phases (Borg and Gall, 2007:589) but even the development design framework is adjusted with the needs occurring in the field. Those procedures include: (1) conducting preliminary study to identify the problem in the context of history learning, (2) analyzing the application of history learning model, (3) analyzing the students' prior knowledge on local wisdom existing around them, (4) analyzing the history learning model and material to see the availability of learning source and local wisdom, (5) designing the particular objective of the integration of local wisdom values using MEA and VCT models, (6) developing the Assessment item instrument used to evaluate the model implementation, (7) developing a instructional or learning strategy, (8) choosing and selecting the supporting instruments, (9) trying out the model and determining evaluation and prior evaluation, and (10) conducting implementation test and final evaluation.

Having conducted need analysis, the next stage is to develop instrument related to particular objective in the form of learning outcome test, while the instrument related to model or design is questionnaire or checklist. This stage is the phase of assessing the instrument by experts (Setyosari, 2013: 230-235). A model can be stated as valid when the model output is acceptable to users and can explain the actuality of implementation (Haryati, 2014). Validation conducted is consistent with the finding obtained from preliminary study and the author tries to develop instrument corresponding to the students' need and ability, just like the evaluation items and learning set is adapted from Bloom's taxonomy. Some points becoming the assessment aspect in instrument are viewed from grammar, layout clarity, structure, and question items, and instruction of instrument use. In this stage, the result of expert validation will be the guidelines for accomplishing the model to be used. The author designates some practitioners as the learning model experts: Prof.Dr. Nunuk Suryani. M.Pd, one of lecturers in historical education postgraduate program and the chairperson of education technology postgraduate study program and department in Sebelas Maret University and Dr. Leo Agung, M.Pd, one of lecturers in historical education postgraduate program.

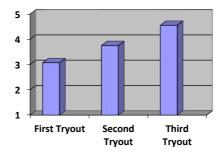
Considering the result of validation, it can be seen that the first expert obtained the mean score of 4.83, while the second one obtained 4.48 at 1-5 point Likert scale. Therefore, it can be concluded that the expert's assessment on the instrument belongs to very good. This assessment was made based on the rubric of assessment on the validity of draft model, Learning Implementation Design (RPP), Questionnaire, Evaluation Item, and teaching material.

Table 1. Result of Expert Validation



The next stage is to tryout the model consisting of three stages: *one-to one trying out* with 5 students as the respondents obtaining the means score of 3.06, *Small Group Tryout* with 10 students as the respondents obtaining 3.75, and *a Whole class of learners* with 30 students as the respondents obtaining 4.54 belonging to very good category, according to Likert Scale. Considering the result of tryout, it can be concluded that there is a significant improvement in the quality of learning process implementation and in the quality of model developed. Revision was also made after every tryout based on the findings of previous tryout phases. The indicators of assessment are: (1) the implementation of learning implementation plan procedures, (2) the reaction principle, that is, the activity design during model application, (3) social system, that is, the relationship between teacher and students during discussion process, and (4) supporting system such as teaching material and learning media.

Table 2. Result of Model Tryout



Evaluation of Model Development

Considering the result of tryout, there are some points requiring improvement:

- 1) The implementation of Learning Procedure is still too rigid and takes much time thereby requiring a good time management.
- 2) The increase of learning source, considering the result of evaluation in the first tryout, it can be seen that the students still find difficulty in exploring the source because of limited teaching material; it is because the author only refers to supplementary module with limited material; therefore in the second and third tryouts, teacher allows the students to search for additional material using internet as the learning source.
- 3) In the context of learning process, the students seem to less capable of adapting to the discussion process and exploring the source, so that the good cooperation is established difficultly in discussion process.
- 4) There are still Free riders in discussion process in the sense of inactive students, so that teachers should distribute their own roles in each individual to prevent the students from being inactive in discussion process.

Considering the finding of tryout stage, some improvement was made in the terms of model syntax procedures and research instrument discussed with other history teachers to get input in order to

accomplish the model. After expert validation and tryout stages, considering the recommendation and finding of previous tryout stages, the final syntax was obtained as follows:

- 1) In phase 1 of MEA, teacher presents the problem with Heuristic-based problem approach, so that when it is related to the concept of history learning process, it can be said that in this phase the teacher provides source and data related to local wisdom material.
- 2) In phases 2 and 3 of MEA, in discussion stage, the students cooperate with each other, with distributing the roles in individual members of group being the first step to avoid the presence of free rider in the group. The students divide the problems given by the teachers into sub-problems; this phase is combined with phase 1 of VCT (choosing/selecting) requiring the students to choose the values existing in the local wisdom.
- 3) In phase 4 of MEA, the students identify the difference based on sub problems and combine it with the step 2 of VCT (appreciating). In this stage, the students are required to solve the problem existing in the learning material and to explore the learning source to find value and to appreciate the values existing in the local wisdom. In this phase, the students attempt to solve the problems or questions prepared by the teachers on evaluate sheet, and the students participate actively in discussion.
- 4) In phase 6 of MEA, the students choose a most solving strategy to achieve the end state and combine it with the phase 3 of VCT (acting on). The students are required to act on, meaning that after having found and appreciated the values existing in local wisdom, the n ext stage is a real action in daily life implementation. In this last phase, the students begin to actualize themselves by realizing the value and choose some values in local wisdom so that the values they have explored are really embedded into the students.

In discussion process, using MEA collaborated with VCT models, it can be seen that the students can cooperate with each other and conceive the values they have chosen and appreciated. It indicates that not only this model can establish the character of students but it is also a process of reinforcing identity by means of recognizing and exploring the source of local wisdom. In addition, the advantage of this model combination can make the students more active and improve cooperation in discussion, so that when the learning process has been very good and conducive, it will impact on as well improving the learning outcome whole the internalization of values existing in the local wisdom can be conceived and can be the daily life guidelines for the students.

In addition, this model is very appropriate when it is related to the use of local history material combined with VCT approach, so that the students can understand the values in local wisdom by conducting discussion in MEA learning model. It is confirmed by Iin Purnamasari and Wasino (2011) stating that the application of local history site-based learning model can improve the students' learning quality as indicated by the very high result of learning evaluation and very good learning activity. In indicates that the application of history learning model using history material or local culture can improve not only cognitive ability but also affective and psychomotor abilities of students, so that the intended objective can be achieved.

VCT serves to clarify the values existing in local wisdom. Every phase of this combined model has significance. Considering a study conducted by Mursetyadi and Masruri (2014), teaching-learning process with VCT is more effective due to the following reasons.

- 1) VCT with student-centered procedure and creating democratic climate in learning. The application of VCT learning gives the students freedom. They are given the freedom of choosing and determining the more believed value, and then they are guided to argue and to draw a conclusion. With this freedom, the students can also choose the learning method, conceive the value chosen and access information corresponding to his learning potency/style. It makes them conceive optimally the values contained in an event or problem, so that the affective values can be embedded more effectively than the application of conventional technique.
- 2) VCT encourages the students more to appreciate the values. In VCT technique, the students are given freedom of determining the values they believe in, by taking various alternative values and the consequence into account. They will appreciate their chosen values more.
- 3) VCT gives the students the opportunity of reflecting the values they have had and believed in. before choosing the values explored successfully, the students consider a variety of consequences and reflect the values believed.

Sometimes conventional learning models explore the values of local wisdom less optimally. There are some factors affecting it: the syntax of model does not run well and there is no approach used to clarify the values existing in local wisdom. Each of local wisdom has typical characteristics; therefore to find out the values contained within it, the appropriate method and approach is required.

The advantage of this combine model is that the students are required to choose and to find and finally to implement the values contained in local wisdom. The research conducted by Suryani (2013) found that VCT model can improve the awareness by conducting an activity in which the students are given opportunity of observing and guided to clarify themselves or other. VCT learning model gives the students the direct experience with determining an attitude to the problem encountered. This model leads the students to apply the value conception to daily life repeatedly thereby allowing for the creation of a habit. It is very important to the establishment of historical value understanding.

The word "internalization" is the end objective of all value-based learning series. To do so, individual teachers sometimes find difficulty so that it becomes a discourse and theory only, and the practice seems to be far below the expectation. The problem the history teacher faces recently is how to include history material and local culture into the learning process actually not having particular space. Therefore, the teachers should be innovative to realize it. The method of internalizing the values into history education can be done in the following ways: (1) learning objective and learning material should be enriched with value mastery, (2) learning process (method and step) chosen should be appropriate to develop value through the active student learning process with indirect teaching approach, (3) the learning is implemented corresponding to RPP, by considering the learning process to master the skill and value internalization; (4) the evaluation should be done on the learning outcome. Therefore, a teacher should be able to modify the learning design combined with an innovative learning model so that the process of internalizing values into material can run well in the learning process (Hasan. 2012:12).

This model has not been perfect yet despite some tryout and evaluation stages. Some factors still need improvement, particularly those affecting the process of integrating local wisdom values into history learning process: (1) globalization factor in which the youths are still influenced much by the foreign culture, so that the culture received will be as if their identity directly and as a result, they sometimes forget and even do not know their own original identity in the context of their indigenous culture, (2) learning environment, in this case learning environment highly affects the creation of student character. The intended environment includes learning circumstance and facilities existing, thereby supporting the learning process of students, (3) teacher factor, the role of teacher is related directly to all components, in this case the teachers' role is very important not only as the facilitator but they are also required to design the learning design innovatively. Teacher should put the students as the center of learning rather than otherwise, (4) the learning material has been explained before that one problem of local material implementation in historical learning is the source, in this case not only teachers are responsible for looking for the learning source, but also all members of community obligatorily help them because it is the collective responsibility in conserving and maintaining our ancestor's heritage, thereby later the elements of local wisdom will not vanish as the time progresses and it will remain to exist until the next generation's period.

Considering the analysis on the essence of local wisdom values, it can be found that they have characteristics of binding identity for each individual, so that when the awareness arises, the sense of belonging will also arise. Indonesia is a plural country and diversity has been indeed our identity united in the sentence *Bhineka Tunggal Ika* (Unity in Diversity). If every individual can realize it, the racist and ethnical conflicts will no longer occur in this country. It can be brought into reality through creating the character earlier and education plays an important role, so that a good strategy is required to integrate the local wisdom values into daily life as the reflection of nation's culture and it should be not only recognized but also maintained. Even the values contained within it should be one of life guidelines that in turn will be our identity starting with a small step in the learning process at school.

Conclusions

Considering the result of research, it can be concluded that MEA collaborated with VCT as the method of integrating local wisdom values into history learning, MEA model enables the students solve their problems and its procedures are appropriate to be used in the discussion about local wisdom material, in which the students are required to choose and to find the values contained within it. VCT serves as the medium of clarifying the existing values in local wisdom. This combination of model and value approach technique is expected to be the solution to the local wisdom values-based learning model and to fulfill the need for an innovative learning model that in turn will impact on the improved quality of learning and to be the means of creating the student character.

References

- Adisusilo, Sutarjo. 2014. Pembelajaran Nilai-Karakter: Konstruktivisme dan VCT Sebagai Inovasi Pendekatan Pembelajaran Afektif. Jakarta: Rajawali Press.
- Amirracahman, Alpha. 2007. Revitalisasi Kearifan Lokal : Stdi Resolusi Konflikdi Kalimantan Barat, Maluku dan Poso. Jakarta: Internatinal Center for Islam and Pluralism.
- Borg and Gall.2007. An introduction: Eight Edition Educational Research.Pearson Education.

 America.
- Daryanto & Rahardjo. 2002. Model Pembelajaran Inovatif. Yogyakarta: Gava Media.
- Daliman. 2012. Metode Penelitian Sejarah. Yogyakarta: Ombak.
- Dick, Walter and Lou Carey.1996. The Systematic Design of instruction, Fourth Edition. New York: Haper Collins College Publisher.
- Djono, 2013. The Development of Historica Instruction/Teaching Material in Senior High Schools Based on Local History with SOI Approach, DIJE Vol 1.
- Haris, Fairizah. 2013. Penerapan Model Pembelajaran VCT untuk Meningkatkan Kesadaaran nilai Menghargai Jasa Pahlawan pada Sekolah Dasar. JPGSD Volume no 01 Nomor 02 Tahun 2013.
- Haryanto, Tri. 2014. Kearifan lokal pendukung kerukunan beragama pada komunitas Tengger Malang Jatim. Jurnal Analisa. Vol 21,no 2 (2014).
- Haryati, S. 2014. Research and Development (R&D) Sebagai salah satu model penelitian dalam bidang pendidikan, *Vol. 37 No. 1, 15 September 2012 : 11-26.*
- Hasan, Hamid S ,2012. Pendidikan Sejarah untuk Memperkuat Pendidikan Karakter. Paramita Vol. 22, No. 1 Januari 2012: 1-130.
- Huda, Miftahul. 2014. Model-model Pembelajaran dan Pengajaran. Yogyakarta. Pustaka Pelajar.
- Iin Purnamasari dan Wasino, 2011. Pengembangan Model Pembelajaran Sejarah Berbasis Situs Sejarah Lokal Di Sma Negeri Kabupaten Temanggung. Paramita Vol. 21, No. 2 Juli 2011.
- Khusniati, Miranita. 2014. "Model Pembelajaran Sains Berbasis Kearifan Lokal Dalam Menumbuhkan Karakter Konservasi". Indonesian Journal Of Conversation. Vol. 3 No. 1-Juni 2014.
- Mursetyadi, Masruri.2014. Keefektivan VCT dalam pembelajaran Sejarah untuk meningkatkan nilai nasionalisme, demokrasi dan multikultural. Jurnal Harmoni Sosial, Volume 1 Nomor 1, 2014.
- Newell, A and Simon H. 1972. Human Problem Solving. Englewood, Nj: Prantice Hall.
- Pratama, Yudi. 2016. Perspektif Pendidikan Multikultural: Revitalisasi Nilai-nilai Kearifan Lokal untuk Meningkatkan Sikap Solidaritas Sosial Pada Pendidikan Sejarah. Prosiding Seminar Nasional & Workshop program studi pendidikan Sejarah Se-Indonesia. Universitas Negeri Yogyakarta.
- Ruyadi, Yadi, 2010. Model Pendidikan Berkarakter Berbasis Kearifan budaya lokal (Penelitian terhadap masyarakat adat kampung benda Kerep Cirebon Provinsi Jawa Barat untuk Pengembangan pendidikan Karakter di Sekolah). *Proceedings of The 4th International Conference on Teacher Education; Join Conference UPI & UPSI Bandung, Indonesia, 8-10 November 2010.*
- Setyosari, Punaji. 2013. Metode Penelitian Pendidikan dan Pengembangan. Jakarta: Kencana Pranadamedia grup.

Suryani, Nunuk,2013. "Pengembangan model internalisasi nilai karakter dalam pembelajaran sejarah melalui model <i>Value Clarificaion Technique</i> ". Paramita Vol. 23 No. 2 - Juli 2013.