

Developing English Materials Using Scientific Approach for Eleventh Graders of Senior High School

Widya Yuli Harianti

English Education, Language and Art Faculty, State University Surabaya

Widyaharianti@mhs.unesa.ac.id

Abstrak

Tujuan dari penelitian ini yang pertama adalah untuk mengetahui aspek analisis kebutuhan siswa pada siswa kelas XI SMAN Mojosari, yang kedua adalah untuk mengetahui bagaimana pengembangan materi itu dilakukan dengan menggunakan metode pendekatan saintifik pada siswa kelas XI SMAN Mojosari, yang ketiga adalah untuk mengetahui hasil penilaian buku dari para penilai (guru) pada siswa kelas XI SMAN Mojosari. Pada penelitian kali ini, menggunakan metode R&D (Research and Development). Subjek pada penelitian kali ini terdiri dari siswa-siswi kelas XI SMAN Mojosari, bu Sulastri, bu Yunita dan bu Ayu sebagai penilai dari pengembangan buku bahasa inggris. Instrumen penilaian yang dipakai dalam penelitian ini adalah kuisioner-kuisioner, lembar interview dan penilaian pengembangan materi. Cara-cara pengembangan materi pada penelitian ini menggunakan lembar kebutuhan siswa, memilih indikator, melakukan pengembangan materi dan merevisi materi. Dalam melakukan pengembangan materi, presentase dan frekuensi dari materi tersebut digunakan untuk menganalisis lembar kebutuhan siswa, lalu indikator akan dikembangkan melalui kebutuhan siswa tersebut. Penilaian pengembangan buku akan dinilai oleh penilai pertama dan kedua. Seperti yang diketahui, hasil dari penelitian ini menunjukkan bahwa (1) bahasa inggris digunakan untuk menambah pengetahuan mereka seperti pada level menengah, (2) kelemahan siswa yaitu dalam mengucapkan kata, (3) mendapatkan solusi, dan (4) membentuk kelompok dalam 3-4 orang. Jadi, penulis mengklasifikasikan 5 cara penerapan metode pendekatan saintifik dalam pengembangan materi yaitu (1) penelitian, (2) mempertanyakan, (3) bereksperimen, (4) menghubungkan, dan (5) mengkomunikasikan. Nilai tengah dari penggunaan metode pendekatan saintifik berdasarkan 4 kemampuan diklasifikasikan "bagus"

Kata Kunci : Pendekatan Saintifik, Materi bahasa inggris, analisis kebutuhan siswa

Abstract

The goals of this research were (1) to discover Need analysis aspect of eleventh graders students of SMAN Mojosari, (2) to discover of the suitability scientific approach for eleventh graders students of SMAN Mojosari, and (3) to discover the result of the review of the materials using scientific approach for eleventh graders of SMAN Mojosari. Research and Development (R&D) research study are used in this research. The students of class XI IPA 1 of SMAN Mojosari, Ma'am Sulastri, Ma'am Yunita and Ma'am Ayu as the materials' reviewers were the subjects. The instruments were questionnaires, interview guidelines and for material's assessment. There were steps to develop the materials proposed by Borg and Gall (2003) such as conduct needs analysis, choosing basic competences, doing materials' evaluation and improving the materials were carried out as the ways of the research. The percentage and frequency would be analyzed the data analysis and then the basic competences were developed from the results. As the result, the study shown (1) english was used for gaining knowledge as their level in intermediate, (2) pronunciation was the lack for the students, (3) getting some feedbacks, and (4) small group for 3-4 people. So, the researcher classified into 5 ways to meet the students's need (1) observing, (2) questioning, (3) experimenting, (4) associating and (5) communicating. The total range mean of using scientific approach based on four skills in the materials was classified "Great".

Keywords : Scientific approach, English materials, Need analysis.

INTRODUCTION

Nowadays, Indonesia joins in MEA so that English as international language is required. Most of students in Indonesia learn English since they

were in Elementary school up to higher level of education. According to Parwaka (2012) also stated English is one of the compulsory subjects. It has

been instructed since in the low level until high level. There are many things that must be prepared to make the process of teaching learning be more efficient and meaningful. One of them is English material. Tomlinson (1998: 2) stated English materials can improve the learner's knowledge and skill because English is our international language. Moreover, English subject should be supported by good teaching learning process in the classroom. In the teaching learning process between students and teacher must make good atmosphere.

However, the fact shows that Indonesia students do not use English in their learning process well. There are some problems in the teaching learning process such as the first it is caused that many teacher give them explanation detail and clearly It means that the teacher dominates the classroom. Second, there are many supplementary materials that are given by the teachers. It seems that material for teaching and learning English is not interesting. Third, It is caused by the weaknesses of the textbook, such as it does not represent variations of reading text, lack of exercises, less of vocabularies, the instruction is not unclear, the learning goals and basic competences are not appropriate. Meanwhile, those are not involved between the language from some resources and the student's worksheet. In addition, it will make the students get bored to study English. As a result, the students are reluctant to study and they are not motivated to learn English.

The researcher used scientific approach in developing english materials. The researcher focused on designing scientific approach for grade eleventh students of senior high school and it is for KD 3.1, 3.2 and 4.1,4.2. Moreover, the researcher focused until developing stage or until the revision, because the researcher didn't give the try out for the students. The steps of developing the materials proposed by Borg and Galls (1983), such as need analysis, course mapping development, materials organization, product assessment, revision, and analyze the data.

Considering the problems above, the teacher should develop the material that encourage the students to be active. The teacher can use scientific approach that support the students more have critical thinking. According to Borg and Galls (1983) stated in this curriculum explains there are several steps in developing the teaching learning activity by using scientific approach such as need analysis, course mapping, materials organization,

product assessment, revision, analyze the data. Therefore, in this step the students will involve their critical thinking through student's creative ideas.

According to the description of research above, the researcher would like to draw questions of the research. The problems that are discussed in this research are stated bellows:

1. What are the need analysis in using scientific approach for eleventh graders students of SMAN Mojosari?
2. How are the materials for eleventh graders of SMAN Mojosari developed using scientific approach ?
3. How is the result of the review of the materials using scientific approach for eleventh graders of SMAN Mojosari?

RESEARCH METHOD

This research was categorized as Research and Development (R & D). Borg and Gall (1983: 772) define R&D as the way to develop the proveness of pedagogical output such as need analysis, course mapping, materials organization, product assessment, revision and analyze the data. The researcher limited until the revision or until the development stage. The researcher didn't give try out in this research.

The subjects of this research objects were the students of eleventh graders. The researcher chose in IPA 1 class. There were 29 students as the participants. The eleventh graders are chosen the subject because the student's ability is on average. It means that the teaching learning process in that school still used traditional method. They still waited for the teacher's response to do the activities in the textbook, so the students got bored and passive.

The researcher also is also taken the information from the other sources such as three english teachers. The first, ma'am sulastris was an english teacher in the eleventh graders in IPA 1 which was the researcher's object. The researcher asked ma'am sulastris to get the interview guidelines. The second, ma'am Yunita was an english teacher in the eleventh graders of IPS 2 and as a reviewer of materials' assessment for this research. The third, ma'am Ayu was an english teacher in the eleventh graders of IPA 2 and as a reviewer of material's assessment for this research. The researcher's materials are evaluated by both of the reviewers.

The research was conducted in SMAN Mojosari which is located in jalan Pemuda, Mojosari - Mojokerto. The researcher chose that school because it was an ordinary school. It means that this school was not the best school, or even not an acceleration school.

In this study, the researcher used The instruments of the research were questionnaires, interview guidelines and expert judgement/ observation checklist (rubric for the reviewer). The first, questionnaires were used to find out the learning needs analysis of the students as the instrument. Those were 17 questions. All of the questionnaires were about the student's learning need analysis. Second, Interview guidelines were kinds of additional information that were used for finding out problems and collecting the data to know the learning needs analysis for the students. There were five questions in the guidelines. Question 1 was used to discover the teacher's idea of the criteria good English materials . Question 2 and 3 were used to discover the teacher's idea of appropriateness to develop English materials. Question 4 and 5 were used to discover the teacher's idea of scientific approach which is used in this study.

Third, The result of materials assessment were kinds of assessment step to get the reviewer's comment before and after designing the materials. The instrument of assessing teaching learning materials is calculated by data conversion table proposed by suharto (2006 : 52-53) and the questions of the materials assessment taken from BNSP of instrument penilaian buku bahasa inggris SMA. There were 4 levels. In level 1 in the range $2.9 < X \leq 3.24$ categorized "bad", in level 2 in the range $3.25 < X \leq 3.49$ categorized "enough", in level 3 in the range $3.5 < X \leq 3.74$ categorized "great", in level 4 in the range $3.75 < X \leq 4$ categorized "excellent". There were 4 points included in the result of materials evaluation. Point 1 was used for the appropriateness content. Point 2 was used for the appropriateness language, point 3 was used for the appropriateness showing the materials. Point 4 was used for the appropriateness graphic.

In this study, the researcher used the research data to know the process of data analysis and decided the quality of abstract in the observation data. Research data for this research were student's learning needs, Teacher's response , the result of materials evaluation for the reviewer.

For source of the data was very important source where it came from in the research. Source of the data for this research were the students, teacher, the syllabus and the related textbook.

In this study, To collect the data, it could be used 3 steps. First, to find out the student's need analysis' it was used questionnaire that should be distributed to the students. Second, to discover the teacher's responses, it was used interviews that could be used for eleventh graders students of senior high school. Third, to discover the quality of the books that would be developed, then it would be given to the validator to evaluate it based on the rubrics of book evaluation that have been prepared to design a book , it used english textbook that would be additional evaluation to develop by collecting the data from questionnaire.

It was kind of ways for collecting and arranging of data so that the researcher could meet the conclusion in the study. It were divided into 3 steps in the data analysis technique. First, the researcher collected the data from the questionarie of the student's learning needs, teacher's response and textbook evaluation or forum group discussion. Frequencies and percentages were used to analyze the student's need analysis. The student's need analysis indicated as the highest percentage. The percentage and frequency would be analyzed by statistic descriptively. Teacher's response from interview were used for knowing the results of the student's learning needs and rubrics of the textbook evaluation were used as the additional information to know the weaknesses of the textbook. Then, all of the data combined and it would analyze descriptively. Second, the researcher decided the basic competences and indicators and made lesson plan that had choosen. After that, lesson plan are used for designing the materials. There were four skills and there were two units that should be designed. Finally, the researcher gave the textbook to the reviewers to get the feedback. After getting the feedback from the result of materials assessment, it will be categorized by using data conversion table proposed by Suharto (2006:52-53). Then, the investigators designing the revisions.

RESULT AND DISCUSSION

In this chapter tells about research findings and discussion. There are several parts such as the results of the need analysis, forum group discussion, design steps, the result of the reviewer, and discussion.

observing, questioning, collecting, analyzing, communicating, and creating.

Related to the results of the third question, the steps of materials development using scientific approach according to Borg and Gall (1983: 772) define R&D as the way to develop the proveness of pedagogical output such as :

1. Need analysis

In designing the materials, it is needed to identifying the students by giving some questionnaires to meet the student's need analysis in the classroom. Need analysis provide the effectiveness of teachers, teaching methods, students, facilities and anything to meet the real needs proposed by Holliday and Cooke (1982). There are several questionnaire such as in necessity questionnaire proposed by Hutchinson (1987: 55), Hutchinson (1987: 56) Hutchinson (1987: 56) , Nunan (2004:47), Nunan (2004:67) and Nunan (2004:64), Graves (2000:103) Nunan (2004:70)

2. Course Mapping

a. Choose the basic competences

3.1 Menerapkan fungsi sosial, struktur teks, dan unsure kebahasaan teks interaksi transaksional lisan tulis yang melibatkan tindakan memberi dan meminta informasi terkait saran dan tawaran, sesuai dengan konteks penggunaannya

4.1 Menyusun teks interaksi transaksional lisan dan tulis pendek dan sederhana yang melibatkan tindakan member dan meminta informasi terkait saran dan tawaran, dengan memperhatikan fungsi sosial, struktur teks, dan unsure kebahasaan yang benar dan sesuai konteks

3.2 Menerapkan fungsi sosial, struktur teks, dan unsure kebahasaan teks interaksi transaksional lisan tulis yang melibatkan tindakan memberi dan meminta informasi terkait pendapat dan pikiran sesuai dengan konteks penggunaannya

4.2 Menyusun teks interaksi transaksional lisan dan tulis pendek dan sederhana yang melibatkan

tindakan memberi dan meminta pendapat dan pikiran, dengan memperhatikan fungsi sosial, struktur teks, dan unsure kebahasaan yang benar dan sesuai konteks.

b. Decided the indicator/ objectives

Basic Competence :

3.1 Menerapkan fungsi sosial, struktur teks, dan unsure kebahasaan teks interaksi transaksional lisan tulis yang melibatkan tindakan memberi dan meminta informasi terkait saran dan tawaran, sesuai dengan konteks penggunaannya

4.1 Menyusun teks interaksi transaksional lisan dan tulis pendek dan sederhana yang melibatkan tindakan memberi dan meminta informasi terkait saran dan tawaran, dengan memperhatikan fungsi sosial, struktur teks, dan unsure kebahasaan yang benar dan sesuai konteks

Indicators/Objectives:

1. Menyebutkan ungkapan-ungkapan yang digunakan dalam memberi dan meminta saran dan tawaran sesuai dengan konteks penggunaannya.

2. Mengidentifikasi struktur teks dan unsur kebahasaan pada teks meminta dan memberi saran dan tawaran sesuai dengan konteks penggunaannya.

3. Membandingkan ungkapan-ungkapan yang digunakan dalam memberi dan meminta saran dan tawaran sesuai dengan konteks penggunaannya.

4. Menentukan fungsi sosial, struktur teks dan unsur kebahasaan yang digunakan untuk memberi dan meminta informasi terkait saran dan tawaran.

5. Menerapkan fungsi sosial, struktur teks dan unsur kebahasaan yang digunakan untuk memberi dan meminta informasi terkait saran dan tawaran.

6. Menyusun teks interaksi transaksional dalam meminta dan

memberi saran dan tawaran secara tertulis.

7. Mempresentasikan teks interaksi transaksional mengenai dalam meminta dan memberi saran dan tawaran secara lisan.

Basic Competences :

3.2 Menerapkan fungsi sosial, struktur teks, dan unsure kebahasaan teks interaksi transaksional lisan tulis yang melibatkan tindakan memberi dan meminta informasi terkait pendapat dan pikiran sesuai dengan konteks penggunaannya

4.2 Menyusun teks interaksi transaksional lisan dan tulis pendek dan sederhana yang melibatkan tindakan memberi dan meminta pendapat dan pikiran, dengan memperhatikan fungsi sosial, struktur teks, dan unsure kebahasaan yang benar dan sesuai konteks.

Indicators/Objectives :

1. Menyebutkan ungkapan-ungkapan yang digunakan dalam memberi dan meminta pendapat dan pikiran dengan memperhatikan fungsi sosial, struktur teks dan unsur kebahasaan yang benar dan sesuai konteks penggunaannya.
2. Mengidentifikasi struktur teks dan unsur kebahasaan pada teks meminta dan memberi pendapat dan pikiran dengan memperhatikan fungsi sosial, struktur teks dan unsur kebahasaan yang benar dan sesuai konteks penggunaannya.
3. Membandingkan ungkapan-ungkapan yang digunakan dalam memberi dan meminta pendapat dan pikiran dengan memperhatikan fungsi sosial, struktur teks dan unsur kebahasaan yang benar dan sesuai konteks penggunaannya.
4. Menentukan fungsi sosial, struktur teks dan unsur kebahasaan yang digunakan untuk meminta dan memberi pendapat dan pikiran dengan memperhatikan fungsi sosial, struktur teks dan unsur kebahasaan yang benar dan sesuai konteks penggunaannya.

5. Menerapkan fungsi sosial, struktur teks dan unsur kebahasaan yang digunakan untuk memberi dan meminta pendapat dan pikiran dengan memperhatikan fungsi sosial, struktur teks dan unsur kebahasaan yang benar dan sesuai konteks penggunaannya.

6. Menyusun teks interpersonal pendek dan sederhana yang melibatkan tindakan memberi dan meminta pendapat dan saran dengan memperhatikan fungsi sosial, struktur teks, unsur kebahasaan yang benar dan sesuai konteks secara tertulis.

7. Mempresentasikan teks interaksi interpersonal pendek dan sederhana yang melibatkan tindakan memberi dan meminta pendapat dan pikiran dengan memperhatikan fungsi sosial, struktur teks, unsur kebahasaan yang benar dan sesuai konteks secara lisan.

3. Materials organization

The researcher tried to make the design of english materials based on questionnaires, the basic competences and indicators that have been choosen.

According to BSNP (2011) stated there were specific criterias to evaluate the materials, it categorized into four criterias such as content, language, presentation, and graphic.

4.Product Assessment

a. aspect of content

in unit 1, the total was 30 and 38. The Mean (x) was 3 and 3,8. Total Mean was 3,5. It classified as “great” as its level in the range $3.5 < X \leq 3.74$.

Moreover, in unit 2, the total was 30 and 37. The Mean (x) was 3 and 3,7 and total Mean was 3,4. It classified as “enough” as its level in the range $3.25 < X \leq 3.49$.

b. Aspect of language

In unit 1, the total was 17 and 23. The Mean (x) was 2,8 and 3,8.. Total Mean was 3,3. It classified as as “Enough” as its level in the range $3.25 < X \leq 3.49$.

Moreover, in unit 2, the total was 18 and 22. The Mean (x) was 3 and



3,6 and total Mean was 3,1. It classified as “bad” as its level in the range $2.9 < X \leq 3.24$.

c. Aspect of Presentation

In unit 1, the total was 39 and 49. The Mean (x) was 3 and 3,7. Total Mean was 3,46. It classified as “enough” as its level in the range $3.25 < X \leq 3.49$.

Moreover, in unit 2, the total was 39 and 48. The Mean (x) was 3 and 3,7 and total Mean was 3,46. It classified as “enough” as its level in the range $3.25 < X \leq 3.49$.

d. Aspect of Graphic

In unit 1, the total was 9 and 12. The Mean (x) was 2,25 and 3. Total Mean was 2,75. It classified as “bad” as its level in range $2.9 < X \leq 3.24$.

Moreover, in unit 2, the total was 10 and 11. The Mean (x) was 2,5 and 2,75 and total Mean was 2,62. It classified “bad” as its level in range $2.9 < X \leq 3.24$.

5.Revision

a. Aspect of content

In unit 1, Giving more exercises especially reading in each activities and in unit 2, Giving more exercises especially reading in each activities.

b.Aspect of language

In unit 1, change the grammatical errors in unit 1 task 4 for dialogue and change spelling errors in unit 1 task 4 for dialogue.

In unit 2 there is no revisions

c.Aspect of presentation

In unit 1, giving additional task in task 11 for grammatical point and change the presentation better.

In unit 2, change the unclear and unmatch picture in task 14. In the textbook, the students should be given the chance to make their own situations.

d.Aspect of graphic

In unit 1, change the fonts and the colour of the fonts into the simple one, Change the placement of title and illustration better and giving the number pages.

In unit 2, change the fonts and the colour of the fonts into the simple one, change the placement of title and illustration better, giving the number pages.

In this study, the researcher need analysis is an element to make appropriate materials and to assess the student’s need. To know the student’s need, it has been done need analysis. It is divided into six parts include necessity, lacks, wants, input, student’s part and teacher’s part and setting.

Necessity is divided into three components such as the student’s goal, English proficiency level, and learning topic. In fact, the students want to gain knowledge about English and the culture so they can relation English well and they prefer to choose in intermediate level to support their later education or job. Moreover, they want to choose the learning topic which is in daily environments. Meanwhile, the students get lacks in pronunciation so the students want to they want to listen to the teacher and repeating after the teacher. According to Hinofotis and Baily (1980, pp. 124-125) proposed that the highest level of the students in the teaching learning process is how to pronounce words. It is supported by Davis (1999) stated that the important thing since the students are in the elementary school until senior high school, they need how to pronounce words well. In the teaching learning process, the teacher must create good atmosphere by giving feedbacks for the students for gathering is small discussion in 3-4 people. So, the students use their creativity in doing the task inside the classroom learning process work well. According to Nunan (2004) that the setting arrangements are specified as the task. The students can enjoy the teaching learning based on the classroom situation and the good materials.

Next ways after doing the need analysis developing. There are many steps to develop materials. It is divided into six steps. Borg and Gall (1983: 772) define R&D as the way to develop the proveness of pedagogical output such as need analysis, course mapping, materials organization, product assessment, revision and analyze the data. This research is limited until the revision or development stage.

According to BSNP (2011) defines that the standard of book criteria can full fill four elements such as content, presentation, language and graphic. Based on the results scientific approach is



suitable to be developed for the eleventh graders students of senior high school.

CONCLUSION

In conclusion, the students want to gain knowledge about English and the culture so they can relation English well and they prefer to choose in intermediate level to support their later education or job. Moreover, they want to choose the learning topic which is in their daily environment. Meanwhile, the students get lacks in pronunciation so the students want to get the dictation of pronunciation from the teacher. In the teaching learning process, the teacher must create condition good atmosphere by giving feedbacks for the students for gathering is small discussion in 3-4 people. To design the materials are taken from the basic competences, indicators, and the lesson plan. Then, the materials are assessed by the reviewer of materials assessment by referring the instruments (Senior High School) which content of aspect content, aspect language, aspect of presentation and aspect of graphic by the experts or materials evaluation. Based on the results, Inquiry-based learning is compability to be developed for the eleventh graders students of senior high school.

SUGGESTIONS

1. For the teachers

The finding of this research hopefully can be the learning model or the reference to be applied in the class, or as evaluation for improvement.

2. For the next researchers

This research hopefully can explain the lack of the previous studies about developing english materials by using scientific approach for eleventh graders and of course, can be the reference comparatively to the research which is about to do.

3. For the readers

This research hopefully have describe the problems, the situations and the results of using the learning modal or the evaluation of the improvement so that they obtain the references on that school.

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