



INSTRUMENTS OF SINGING PERFORMANCE ASSESSMENT WITH THE ANDROID BASED INVENTOR APP

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Article

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Abstrak

Penilaian kinerja bernyanyi masih dinilai secara subjektif oleh dewan juri, guru, atau panitia. Untuk memahami aspek asesmen dalam bernyanyi diperoleh informasi dari dua orang ahli yaitu seorang dari SMP Negeri 24 Semarang dan seorang musisi Purwacaka yang memiliki Sekolah Musik Purwacaka di Indonesia. Penelitian ini bertujuan untuk menghasilkan aplikasi penilaian performans bernyanyi dengan App Inventor 2 (AI2) yang dikelola oleh Massachusetts Institute of Technology (MIT). AI2 adalah penyimpanan berbasis cloud yang dapat diakses dari browser internet. Model pengembangan ADDIE dengan 5 tahapan yaitu: Analisis, Desain, Pengembangan, Implementasi, dan evaluasi. Indikator dalam penelitian ini adalah kepraktisan, daya tarik, ketepatan, dan kecepatan menilai. Pengumpulan data untuk analisis kebutuhan dilakukan secara kualitatif dengan wawancara dan dokumentasi. Aplikasi penilaian bernyanyi terdiri dari empat kriteria penilaian yaitu: teknik, ekspresi, interpretasi lagu, dan demonstrasi yang terdiri dari 18 item. Aplikasi ini telah diuji oleh tiga ahli dengan hasil: menarik, skor akurat, dan perhitungan skor lebih cepat. Kelebihan dari aplikasi ini adalah skor yang hanya bisa dilihat satu persatu kemudian harus ditampilkan seluruhnya dan bisa dicetak

Abstract

Singing performance assessment still subjectively graded by jury, teacher, or committee. To understand assessment aspects in singing, the information was obtained from two experts one from junior high school 24 Semarang and the other a musician, Purwacaka, who has Musical School Purwacaka in Indonesia. This research aimed to produce singing performance assessment application with App Inventor 2 (AI2) that managed by Massachusetts Institute of Technology (MIT). AI2 is a cloud-based saving that could be accessed from internet browser. ADDIE development model with 5 steps, which are: Analysis, Design, Develop, Implementation, and evaluate. Indicators in this research were practicality, attractiveness, accuracy, and quickness in assess. Data collection for needs analysis taken qualitatively by interview and documentation. The singing assessment application consist of four assessment criteria, there are: technique, expression, song interpretation, and demonstration that form 18 items. This application has been tested by three experts by result: attractive, accurate score, and faster score calculation. The improvement for this application was score that could only be seen one by one later should be showed entirely and could be printed

INTRODUCTION

Singing is an important component of the basic general music curriculum and major component of the choir music curriculum (Nichols, 2017). One of the competencies that high school students hope to master is the ability to sing. Singing ability is assessed from predetermined indicators. In sequential assessment, step by step is carried out by all teachers. Measuring progress can be useful only if it is a frequent teaching feature, not a haphazard "test" given only for school reporting purposes (Nichols, 2017). In music school or music academy educational practice, imperfection of performance evaluation criteria is manifested by the fact that the evaluation subject and music experts are able to make accurate performance evaluations that are not clearly defined (Mazur & Laguna, 2017; Utomo, U., Rachman, A., & Wafa, 2019). The success of achieving student competencies will be largely determined by the experience and knowledge of the teacher in developing, and using the constructed measuring instrument in the right way, and the ability to analyse. The information generated by the measuring instrument (Mujianto, G., & Raharjo, 2019; Rahmawan & Sumaryanto, 2016).

METHOD

This study uses the ADDIE approach, there are five stages, development process, consisting of Analysis, Design, Develop, Implement, and Evaluate. The ADDIE model is one of the most common models used in the field of effective learning design. This model helps an instructional designer, any content developer, or even a teacher to create an efficient and effective teaching design by applying the ADDIE model process to any instructional product. In fact, the elements created by following the ADDIE model can be used in online or Face-to-face learning (Aldoobie, 2015).

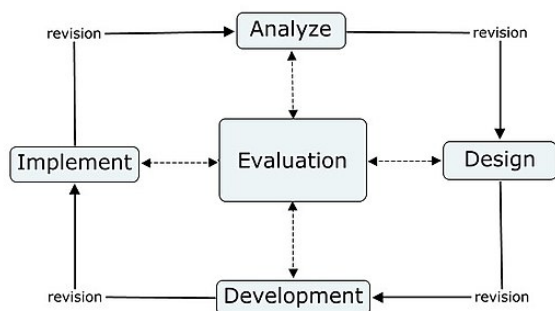


Figure 1. ADDIE Model

Data analysis was collected using qualitative research and emphasized the social construction aspects of reality, which focused on disclosing the social meaning of a phenomenon built by participants or research subjects. Qualitative research seeks to answer how human socio-cultural experiences are shaped and given meaning (Denzin, Norman K., 2009). Starting from a field needs analysis obtained from interviews with teachers and professional judges, resulting in transcript data of interviews that are processed to design the required application, then make the application and implement it to the jury or vocal teacher, from this, we can find out the deficiency or evaluation.

RESULT AND DISCUSSION

The needs analysis in the field, the researcher interviewed a music teacher who was also a professional as jury who teaches at SMP 24 Semarang and the second was Purwacaraka, (born in Beogard, Yugoslavia, March 31, 1960; age 59 years) a musician, composer, and songwriter of Indonesian nationals. His musical works in the form of song compositions and illustrations often show on Indonesian films and soap operas and he is the patent holder of the Purwacaraka Music Studio music school.

The results of the interviews with the two figures showed that the assessment of singing ability currently uses manual methods and indicators of singing ability are sometimes ignored by the jury or the teacher who assesses it because it is difficult to observe, the scoring is between 50-90 and sometimes there is a difference in the assessment between the judges to determine the winner not only a score but also ends with a discussion to determine the winner or its value. Calculating the score also takes time and it is efficient because it uses manual calculations. The indicators that must be assessed in the assessment of singing performance are: tone accuracy, articulation, tempo accuracy, phrase ring or breathing, improvisation, accuracy of resonance, vibration, dynamics, accuracy of song interpretation, deepening of exploration and appreciation, harmony with music, posture, sonority / character, volume or power, performance / style, stage action, neatness, stage blocking, posture and gestures.

The needs analysis that has been carried out by interview produces a transcript of the interview whose data is processed to be able to make the application design needed for the assessment of singing ability. Vocal assessment applications that will be made using the Android-based App Inventor requires an initial design both in terms of content, color selection and an attractive appearance. The first thing to do is to create several application display screens, there are: 1. Home, which is the initial display design, 2. Home which contains the application menu, 3. An introduction containing information about the application, 4. Researcher's profile, 5. Tutorial on using applications to make it easier for users in running the application, 6. Rubric for Assessment, 7. Indicators for singing assessment, then 8. Assessment process and results.

Example of apps design:



Figure 2. Home Screen

After the application design has been created, we will create the application using App Inventor 2 (AI2), which is the second-generation idea of App Inventor managed by the Massachusetts Institute of Technology (MIT). Cloud-based AI2 accessed using an internet browser. Included in the visual programming category, AI2 uses block puzzles that are arranged into a series of codes (Wihidayat, E. S., & Maryono, 2017).

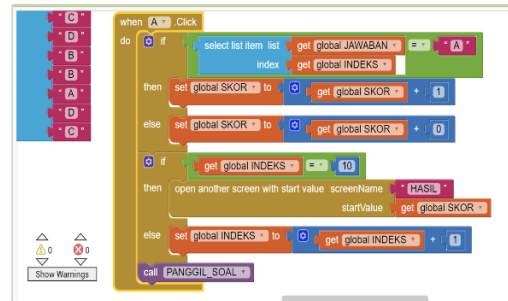


Figure 3. Block puzzle in AI2

AI2 has 3 main parts, Component Designer, Block Editor and Android Device which are used for testing. Testing can use an emulator or an actual device.

CONCLUSION

The process of making this singing assessment application uses an internet browser. We can open the AI2 website and make it online by clicking Create Apps and logging in using our email account, then clicking start new project and the design that has been created is applied by clicking Add screen according to the number of pages we want. We can design this screen on each page according to creativity and content needs. To make this application run, right click on: blocks. These blocks will determine whether our application runs or not. The coding of this application must be precise and thorough in its making because if the numbers or writing are entered incorrectly, it will result in the application not being able to run as well.

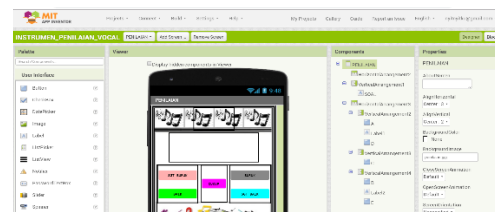


Figure 4. Display of *designer* before creating *blocks* for coding.

After finishing making the design and blocks we will try the application by clicking build and selecting App (save. Apk to my computer), then the process will run for a while and you can find the apk file in the download folder. After we install it on Android, the application can be used offline.

The implementation of this application is submitted to users (judges, teachers and lecturers) to be tested as a singing performance appraisal application to students and provide instrument validation sheets. The results of filling out the validation sheet show that the application is suitable for use as a singing performance appraisal application with improvements to the results screen. The title on the media is attractive, the size and shape of the writing is attractive, the color of the title or content on the media is correct, the application design is attractive, the singing assessment indicator is correct, the scoring rubric is correct, the score given is appropriate, the calculation of the score is practical and faster, instructions for use clear, fast command processing.

The expert's suggestion is that the score results can be seen in their entirety and can be printed. If it can be printed, the expert judgment can see the overall score data without having to manually record the scores obtained.

Temporary data base in this application can be seen on the "Results" screen by writing the name to be searched for and clicking the "Find" button. The score will appear automatically.

The Sing Rating app above can be used with the last output being a score. According to one music expert, Purwacaraka, if a problem is encountered in determining the score, the winner can be determined from the jury's discussion, which one is more appropriate by considering various aspects of the assessment. The criteria determined by the competition organizer committee must be clear and there is a chairman of the jury who is competent in the field of singing assessment.

The number of judges in the assessment must also be odd to avoid unequal judgments, because singing judging is sometimes subjective and problematic in different creativity.

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