

The Use of QR Code-Based Digital Flashcard as a Media for Promotion and Socialization to Increase the Competitiveness of the Creative Economy and Small and Medium Enterprises

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Abstract-*The China ASEAN Free Trade Area (CAFTA) agreement in 2010 and the ASEAN Economic Community (AEC) in 2015 serve as both an opportunity and a challenge for Small Micro Medium Enterprises' (SMMEs) products in all cities in Indonesia. In order to further increase sales in traditional markets, especially from SMMEs' products and creative industries, an information and promotion media is required to increase public interests, both people from Cirebon (indigenous tourism) and outside Cirebon to get to know existing SMMEs' products and creative industries utilizing the media as an educational technology. This study aims to develop a QR code-based digital flashcard model as a media for promotion and dissemination to increase the competitiveness of the creative economy and Small and Medium Enterprises in Indonesia. From the promotion, it is expected that the public's interest to do shopping in traditional markets will increase so that the sales of products from SMMEs' can increase. The research model used in this study is a four-D device development model, Model (4D). This four-D development model (4D) consists of four stages, namely the definition phase (Define), the Designing Phase (Design), the Development Stage (Develop), the Deployment Stage (Disseminate).*

Keywords: creative economy, digital flashcard, promotion media, SMEs

I. INTRODUCTION

Scientific progress of education technology is one of the factors causing a paradigm shift in education. In order to achieve educational goals, a variety of tools and methods are required, the term "tool" here refers to media of education. Media as a tool, method, and technique used in order to improve the effectiveness of communication and educative interactions between teachers and students in the education process shifts its paradigm in other sectors including the economy. Media usage facilitates consumers to absorb knowledge effectively and efficiently on the desired product. In addition, learning will be more easily understood by the existence of learning media, thus learning process will be lively and not monotonous.

The progress of scientific media in educational technology also provides a variety of learning media both online and offline, which can assist SMMEs and creative industries to creatively market their products which apparently was monotonously marketed. In short, they can adopt the existing technological developments in marketing program.

In order to further increase sales in the traditional market, especially SMMEs products and creative industries in Cirebon, such as batik products, local products and tourism, an information and promotion media is needed to increase public interest, both indigenous people and people for nearby cities to get to know the existing SMME products and creative industries. By utilizing the rapidly developing technology such as mobile devices/mobile phones, QR Code-based Digital Flashcard Development research is conducted to increase the competitiveness of creative economy and Small and Medium Enterprises in Cirebon City, West Java. From the promotion, it is expected that the public's interest in shopping in traditional markets will increase so that the sales of products from SMEs can increase.

Based on the above background, the research problems are formulated as follows: How to develop a draft QR code-based digital flashcard model for increasing the competitiveness of the creative economy and Small and Medium Enterprises in the city of Cirebon, West Java?

This study aims to develop a QR code-based digital flashcard model as a media for promotion and socialization to increase the competitiveness of the creative economy and Small and Medium Enterprises in the city of Cirebon, West Java. From the promotion, it is expected that the public's interest in shopping in traditional markets will increase so that the sales of products from SMEs can increase.

The significance of this research is as follows:

1. Developing the science of Educational Technology focusing on development of QR-based digital flashcard media to foster creativity in marketing products that so far seem monotonous and do not miss the existing technological developments.
2. Increasing the competitiveness of the creative economy and small and medium enterprises in the city of Cirebon, West Java through the use of QR-based digital flashcard media. From the promotion, to increase the public's interest in shopping in traditional markets to enhance the sales.
3. Thus, this study seeks to find a model of promotional media and socialization that can be applied to increase the competitiveness of creative economy and small and medium enterprises in the city of Cirebon, West Java.
4. This research is significant in that it can stimulate standard implementation in the development of promotional media so that it can be developed in other cities in order to increase the competitiveness of the creative economy and small and medium enterprises.

II. METHOD

The research model used in this study is a four-D device development model, Model (4D). This four-D development model (4D) consists of four stages, namely definition (Define), Designing (Design), Development (Develop), and Distribution (Disseminate), (Trianto, 2012). This development model is employed since the stages used were in accordance with the research conducted. Development of a digital flashcard QR code can be developed with a 3D development model.

The first stage is the defining stage which aims to define marketing requirements including initial analysis, consumer analysis, task analysis, concept analysis, and marketing objectives specifications.

The second stage is the design stage (design), at this stage the researchers designed the digital flashcard before the trial was carried out, the digital flashcard design that was composed consisted of several components of digital flashcard.

The third stage is the develop stage. This stage aims to produce a digital flashcard in the form of a QR code that is a product marketing application that has been revised based on suggestions from experts. This stage includes validation from content experts, media experts, limited trials, revisions and field trials.

Product testing is the implementation of the application of the development of a digital flashcard QR code to know the SMEs in Cirebon City. This trial was conducted to get responses from consumers to the media that had been developed.

The subject used was a validation expert consisting of Media Experts, Content Experts and prospective consumers of SMMEs in the city of Cirebon consisting of 16 business actors.

The types of data obtained from this study are qualitative and quantitative data. Qualitative data is obtained through interviews, observations and utilization of documents, by interpreting phenomena that occur and are carried out by involving various methods. While quantitative data is obtained through the results of validation and consumer responses, then analyzed by percentage techniques. The instruments of data collection used by researchers were media validation sheets, content validation sheets and consumer response questionnaires.

The data analysis technique used in this study was a validation sheet by media experts and content experts analyzed with quantitative descriptive. The percentage is obtained based on calculations according to the Likert Scale. Consumer response questionnaire from the results of the questionnaire that has been distributed to consumers. The questionnaire contains consumer responses to media marketing by using a digital QR code developed flashcard. The questionnaires were then analyzed descriptively quantitatively. The percentage is obtained based on the Guttman Scale calculation.

III. RESULTS

The results of the are to answer the formulation of the problems that have been determined, the data that will be presented are the results of the development of a digital QR flashcard before and after development, the feasibility of the media and the results of consumer responses. The following are the results of research on the

development of digital flashcards in introductory office administration subjects by using a QR code for SMEs in the city of Cirebon

a. Defining Phase

At this stage, the initial analysis is carried out to identify the problem, it is known that in the marketing process only using leaflets, posters, brochures or saved in the form of online and social media.

The second stage is the stage of consumer analysis carried out by testing the product, the subject who was the target of a digital flashcard trial QR code is a prospective consumer. This analysis is done to find out consumers by analyzing different consumer characteristics such as age, gender and academic level.

The third stage of the task analysis contains questions that aim to find out the profile in the form of quizzes on the profile of SMMEs. The fourth stage is concept analysis, concept analysis is done to determine what information is available on digital flashcard media QR code to find out the SMMEs in Cirebon City. The development of this media consists of several slides accompanied by supporting images to facilitate consumers to understand flashcard information.

The last stage is the specification of marketing objectives. This stage is in accordance with the marketing objectives used as the basis for information on the digital QR code flashcard on the Cirebon SMMEs that will be developed.

b. Design Stage

This stage is performed to plan a design and determine the information that will be used as marketing content, the content is taken through various sources both documentation studies and direct interviews with business actors. The next step is the initial media design process. The researchers create a tailored made media according to the needs of consumers such as the completeness of the content and illustration of images in the form of Augmented Reality.

c. Development Phase

The development phase aims to produce a digital flashcard QR code to recognize the Cirebon SMEs in accordance with feasibility. At this stage the draft prepared by the researchers in the form of content and the media produced will be reviewed and validated by content experts and media experts.

The validation technique is performed by the validator by giving a check (√) in the assessment column in the validation sheet, as well as in-depth interviews with content and media experts who have reviewed the media. Based on the criticisms and suggestions from the experts, the developers will revise the media. Eventually, the revised and improved media will be tested on 16 potential customers to find out the consumer response about this digital QR code flashcard.

d. The Feasibility of digital *Flashcard*

Validation results from digital QR cards in the form of assessments from content experts. The results of digital flashcard validation by content experts are as the following:

Table 1. Instrument feasibility result

| No. | Aspects to be assessed | Percentage | Remark |
|-------------------------------|-----------------------------|------------|---------------|
| 1. | Average Information Quality | 82,5% | very feasible |
| 2. | Average marketing quality | 84,4% | very feasible |
| 3. | Average technical quality | 82,5% | very feasible |
| The average of overall aspect | | 83,03% | very feasible |

Source: data processed by researchers (2019)

It can be seen that media validation carried out by content experts obtained an average percentage of 83.03% in that the quality of content and information, marketing quality and technical quality was stated to be very feasible. Therefore marketing materials could be developed into digital flashcards.

Validation results from a digital flashcard QR code in the form of assessments from media experts, the following are the results of digital flashcard validation by media experts, namely:

Table 2. Results of Media Validation by Media Experts

| No. | Aspects to be assessed | Percentage | Remark |
|--------------------------------|--------------------------|------------|---------------|
| 1. | Average display quality | 85% | very feasible |
| 2. | Average quality of usage | 85% | very feasible |
| The Average of overall aspects | | 85% | very feasible |

Media validation carried out by media experts obtained an average percentage of 85%. It means that the display quality and usage quality was stated to be very feasible, so that digital flashcards could be developed.

Consumer Response

After validation from experts, then a limited trial was conducted on 16 prospective consumers in the city of Cirebon SMEs, this trial was conducted to determine their response to the media QR code that had been developed. The results of consumer responses to digital flashcards QR codes are deemed feasible with a percentage of 86.06%, so that digital QR cards can be used in marketing activities.

IV. DISCUSSION

Research on the development of digital flashcards uses a type of R & D (Research and Development) research. The R & D method is "research methods used to produce certain products, and test the effectiveness of these products" (Sugiyono, 2010). This development uses a 4-D development model. The 4-D model is a development model used in this media research to determine media feasibility. This 4-D development model consists of four stages, namely, Defining (Designing), Designing (Design), Development (Develop), and Dissemination (Disseminate), (Trianto, 2012).



Picture 1. Digital QR code Interface Flashcard

Digital flashcard QR code can be used as an alternative marketing medium other than social media such as research conducted by Priambada (2015), where the use of social media is strongly correlated with the distribution of MSMEs, especially in terms of increasing sales volume. According to Castronovo (Permana, 2014) trading activities mediated by social media, can have an impact on sales. Several previous studies were conducted by Ragu-Nathan & Rao (in Li, 2006), Majeed (2011), Nguyen, Sherif, & Newby (2007), Alipour & Mohammadi (2011), Barney (1991), and Agha (2012) also concluded that there was an influence between the competitive advantages possessed by SMMEs if marketed through the media. In this study, it was found that there is a positive effect which means that if the competitive advantage possessed by an SMME is higher, it will have an impact on increasing sales if marketing promotion is performed with the media.

The results of the feasibility of the media QR code can be identified from the validation carried out by experts consisting of two validators namely one content expert and one media expert. Validation is performed by completing in the validation sheet in the form of a questionnaires .

Based on the results of the material validation analysis by the validators, it can be seen that the percentage of the feasibility component of the information obtained a percentage of 83.03% with very feasible criteria. The media feasibility component obtains a percentage of 82.5% with very feasible criteria.

It can be concluded from the results of the overall validation assessment covering the material and the media stated to be very feasible and can be used as a marketing medium.

Assessment of the feasibility of media QR code is also obtained from consumer response questionnaire analysis. The questionnaire of the prospective customers' responses was filled in when trials were carried out limited to 16 prospective customers. Based on the results of the consumer response questionnaire analysis obtained an assessment percentage of 86.06% with very feasible criteria.

From the results of the overall percentage of indicators of material feasibility and the feasibility of the media based on the quality of the content and objectives, technical and instructional then the overall percentage average is calculated. And the calculation results can be seen in the following table:

Table 3. Recapitulation of Media Feasibility

| No | Validation | Percentage (%) | Eligibility Criteria |
|----------------|----------------------------------|----------------|----------------------|
| 1 | Kual Content Experts | 83,03% | Very Feasible |
| 2 | Media Experts | 82,5% | Very Feasible |
| 3 | Consumer response questionnaires | 86,06% | Very Feasible |
| Percentage (%) | | 256,59% | |
| Average | | 85,53% | Very Feasible |

Source: Data Processed by researchers

It can be concluded that digital flashcard is very suitable to be used as a media for promotion and socialization to increase the competitiveness of the creative economy and Small and Medium Enterprises in the city of Cirebon, West Java. From the promotion, it is expected that the public's interest in shopping in traditional markets will increase so that the sales of products from SMEs can increase.

V. CONCLUSION

Based on the results of the development and discussion of digital QR code flashcards that have been carried out, it can be concluded that the results of the study are as follows: (1) Development of a digital QR code flashcard using a 4-D development model. This 4-D development model consists of four stages, namely, Defining (Define), Designing (Design), Development (Develop), and Distribution (Disseminate). Media QR code was developed from presentation media previously used in the learning process, namely flashcard media, (2) Based on the validation carried out by material experts and media experts consisting of one material expert and one media expert, it can be concluded that a digital flashcard QR code was stated very feasible with a percentage of 86% and can be used in the marketing process, (3) From the validation by material experts and media, a draft will be used as a consumer response questionnaire. Consumers give a positive response as evidenced from the results of the assessment criteria stated that a digital flashcard QR code is very feasible to use. So it can be concluded that the digital flashcard QR code for increasing the competitiveness of the creative economy and Small and Medium Enterprises in the city of Cirebon, West Java is very feasible to use in the marketing process.

References

- Agha, S., Alrubaiee, L. & Jamhour, M. (2012, January). "Effect of Core Competence on Competitive Advantage and Organizational Performance." *International Journal of Business and Management*, 7(1), 192-204.
- Alipour, M. & Mohammadi, M. H. (2011, April). "The Effect Of Customer Relationship Management (CRM) On Achieving Competitive Advantage Of Manufacturing Tractor." *Global Journal of Management and Business Research*, 11(5), 26-36.
- Barney, J. (1991). "Firm Resources and Competitive Advantage." *Journal of Management*, 17(1), 99-120.
- Aribowo, Ismunarso Teguh. (2012). *Keefektifan Penggunaan Multimedia Prezi Pada Pembelajaran Keterampilan Menulis Bahasa Jerman di SMA Negeri 2 Banguntapan Bantul*. Skripsi. Yogyakarta. UNY.
- Li, S., Ragu-Nathan, B., Ragu-Nathan, T.S. & Subba Rao, S. (2006). "The Impact of Supply Chain Management Practise on Competitive Advantage and Organizational Performance," *Omega*, 34(1). 107 – 124.
- Majeed, S. (2011). "The Impact of Competitive Advantage on Organizational Performance." *European Journal of Business and Management*, 3(4), 191-196.

- Nguyen, T. U. H., Sherif, J. S. & Newby, M. (2007). "Strategies for Successful CRM Implementation." *Information Management & Computer Security*, 15(2), 102-115.
- Mustaji. 2005. *Pembelajaran Berbasis Konstruktivistik Penerapan Dalam Pembelajaran Berbasis Masalah*. Surabaya: Unesa University Press.
- Priambada, Swasta. (2015). "Manfaat Penggunaan Media Sosial Pada Usaha Kecil Menengah (UKM)," no. November: 2-3.
- Rodhi, Mohammad Yusuf. 2014. *Pengembangan Media Pembelajaran Berbasis Prezi untuk meningkatkan keterampilan Berfikir Kritis Pada Materi Kalor*. Vol 3 Nomor 2.
- Septian. (2015). *Pengembangan Media Pembelajaran Blog Berbasis ICT (Information and Communication Technology) Pada Materi Medeskripsikan Otoritas Jasa Keuangan(OJK) di SMA Negeri 1 Manyar Gresik*. Skripsi. Universitas Negeri Surabaya.
- Sugiyono. (2010). *Metode penelitian pendidikan pendekatan kuantitatif, kualitatif dan R&D*. Bandung:Alfabeta. p 297
- Suryani, dkk. (2014). *Penggunaan Media Prezi pada materi sistem peredaran darah manusia untuk meningkatkan kreativitas peserta didik SMA Negeri 1 Lhoksukon*. Vol 3 Nomor 1.
- Trianto. (2012). *Mendesain model pembelajaran inovatif-progresif: Konsep, Landasan, dan Implementasinya Pada Kurikulum Tingkat Satuan Pendidikan (KTSP)*. Jakarta: Kencana Prenada Media Group. p 93
- Trianto. (2013). *Mendesain model pembelajaran inovatif-progresif*. Surabaya : Kencana
- Wulandari, Elisha. (2014). *Pengembangan Desain Media Pembelajaran Online Berbasis Aplikasi Prezi Pada Standar Kompetensi Korespondensi Bahasa Indonesia SMK Kompetensi Keahlian Administrasi Perkantoran*. ADP Volume III, Nomor 10.