

**THE APPLICATION OF QR CODES AS A TEACHING TOOL IN ENGLISH
LANGUAGE TEACHING AT VOCATIONAL HIGH SCHOOL
(A Case Study at SMK Negeri 1 Wajo)**

***PENERAPAN QR CODES SEBAGAI ALAT PEMBELAJRAN DALAM
PENGAJARAN BAHASA INGGRIS DI SEKOLAH MENENGAH KEJURUAN
(Studi Kasus di SMK Negeri 1 Wajo)***

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THESIS

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ENGLISH LANGUAGE TEACHING AT VOCATIONAL HIGH
SCHOOL (A CASE STUDY AT SMK NEGERI 1 WAJO)**

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ABSTRACT

Hairil Bahar. The Application of QR Codes as a Teaching Tool in English Language Teaching at Vocational High School (Case Study at SMK Negeri 1 Wajo). (Supervised by Nasmilah and Abidin Pammu)

The development of technology brings innovations to all aspect of life including education. The QR (Quick Response) Codes is one of these innovations. The aim of this study is to explore the strengths, weaknesses, opportunities, and threats of integrating QR Codes in English language teaching. Data were collected by interviewing teachers, students and conducting observation during the implementation. Most of students were unfamiliar with QR Codes but the findings indicated that it brought positive effect in their learning activities due to its ease of use, various contents, direct linking, and attractiveness.

Keywords: English language teaching, QR codes, SWOT Analysis



ABSTRAK

Hairil Bahar. Penerapan QR Codes sebagai Alat Pengajaran dalam Pembelajaran Bahasa Inggris di Sekolah Menengah Kejuruan (Studi Kasus di SMK Negeri 1 Wajo). (Dibimbing oleh Nasmilah dan Abidin Pammu).

Perkembangan teknologi membawa inovasi ke semua aspek kehidupan termasuk pendidikan. QR Codes (Quick Response) adalah salah satu dari inovasi tersebut. Tujuan dari penelitian ini adalah untuk mengeksplorasi kekuatan, kelemahan, peluang, dan ancaman mengintegrasikan QR Codes dalam pengajaran bahasa Inggris. Data dikumpulkan melalui wawancara kepada guru dan siswa, serta melakukan observasi selama pengimplementasian QR Codes. Sebagian besar siswa tidak terbiasa dengan QR Codes tetapi temuan menunjukkan bahwa itu membawa efek positif dalam kegiatan belajar mereka karena kemudahan penggunaannya, konten yang beragam, akses langsung, dan daya tariknya.

Kata kunci: pengajaran bahasa Inggris, QR Codes, Analisis SWOT



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CHAPTER I

INTRODUCTION

A. Research Background

It is obviously impossible to deny the advancement of technology in this digital era. It has been demonstrated to be beneficial in many aspects of human life, including educational domain. Employing and integrating technology in educational setting has become a concern among educational practitioners. Further, the notion of educational technology emerges as a systematic and well organized process in applying technology to improve the quality of education.

As a mean of improving the quality of education, utilizing technological advancement and maximizing its potential is seen as a current issue which demands scientific inquiries. Numbers of studies have effectively integrated technology as pedagogical tools. These tools enable teachers and educators to facilitate meaningful learning inside and outside of the class. The effects can also be the stage to increase motivation, enrich instructional period, design objective evaluations.

Educational technology can be derived in various platforms. Electronic devices such as television, tape, and computer, in fact, have been utilized for decades. However, as technology changes, it started offering more handy devices. Mobile phone and tablet are personal gadgets used by almost everyone. Today's students interact with technology more than ever before. Traxler (2009) revealed that learning can be anytime, anywhere



and it also can be personalized, situated and authentic. It signals that convenience and connectivity are features that personal gadget possessed. Learners feel connected with others without limited by time and distance because they have access in their handy devices. Moreover, they can engage in learning in natural way which is convenient to them.

The notion of authentic teaching has led the integration of non-educational tools and materials into pedagogical activities. One of the tools is QR Codes. Quick Response (QR) codes were introduced in 1994 as 2-dimensional barcodes. A multilingual text which is linked to URL, product reviews or just any information that embedded into it. Even though this tool is popularly used as an effective tool in marketing, advertising, product information, and logistics, it is potential to be integrated in teaching and learning.

QR Codes is readable with moderately installed in mobile devices equipped with cameras. Besides, the use of mobile devices among students their daily life, including in school, QR codes in mobile devices can be integrated in classroom activities. This is supported by several studies on the possibilities of integrating m-learning in the classroom which received similar positive reaction from students (Clarke et.al 2008, Al-Fahad, 2009; Wang, 2009; Garrett & Jackson, 2006; Cavus & Uzunboylu, 2009; Uzunboylu et.al, 2009; Manair, 2007; Maag, 2006). Students feel

ent and more flexible when using mobile devices in learning (Clarke



et.al, 2008; Cavus & Ibrahim, 2009; Bottentuit Junior, 2008; Al-Fahad, 2009).

The use of QR codes have shown positive impact in education. However, only few studies found concerning language teaching and learning. Concerning the gap, the researcher believes that further investigation is needed. In addition, based on the researcher's experiences as a teacher at SMKN 1 Wajo and the preliminary study conducted, some problems have been found. This preliminary study was conducted by interviewing English teachers at the school. As we know, the scientific approach is one of the characteristics of the application of the 2013 curriculum, in which students are invited to experience what is being learned from the theory of science through five process, namely the process of observing, questioning, experimenting, associating, communicating. By inviting students directly, students are expected to easily achieve the purpose of learning, which then has an impact on improving learning achievement. But the fact, teachers can't always count on students to arrive with the mental and physical sharpness needed for optimal learning using those five principles. What should the teachers do when students become sleepy and unmotivated? QR Codes could be the solution.

In conclusion, due to the gap and the problems found, this research aims to investigate the use of QR codes as teaching tool at SMKN 1 Wajo

receive clear description about how QR Codes possibly overcome the
s found.



B. Research Questions

1. How do students of SMKN 1 Wajo perceive the use of QR Codes in English language teaching?
2. How do teachers of this school perceive the use of QR Codes in English language teaching?
3. How are strengths, weaknesses, opportunities, and threats reflected in the use of QR Codes in English language teaching at SMKN 1 Wajo?

C. Research Objectives

The research objectives are framed in the following statement, “To explore and identify the strengths, weaknesses, opportunities, and threats of using QR Codes at SMKN 1 Wajo.”

D. Research Significance

Findings of this research are expected to be contributive to the development of language teaching and learning in general, and the integration of technology for classroom teaching and learning in particular. Theoretically, the investigation in this research would give a new perspective on the use of technology in classroom as instruction as well as its potential contribution. Moreover, empirically, this research is also expected to give benefit for students, language instructors, educational institution, and other researchers. The experience of using QR Codes aims

to be a new way in extending their ability in learning language. It is also expected to be helpful for language instructors to be used as a teaching



instruction. In a broader term, this research is hoped to provide an alternative teaching tool to be integrated in curriculum.

E. Scope of the Research

The research focuses on the strengths, weaknesses, opportunities, and threats of integrating QR Codes in English language teaching. It involves two classes of x year students of Vocational High School 1 Wajo (SMK Negeri 1 Wajo) and two English teachers as participant. There are 11 classes of the first year, in this case all of them could possibly be chosen to be the participants. Those two classes (Computer Network Engineering and Multimedia Engineering) chosen purposively to suit the schedule set. The application used in the study is QR Scanner and Barcode Maker developed by Mobile Apps Dunia which is downloadable from Playstore or Apps Store.



CHAPTER II

LITERATURE REVIEW

A. Review of Related Previous Studies

As mentioned in the introduction, research has shown that learners are trying to suit learning materials with their lifestyle. Several studies have been conducted. Integrating m-learning in the classroom is an option and the fact is, it received positive reaction from students (Clarke et.al 2008, Al-Fahad, 2009; Wang, 2009; Garrett & Jackson, 2006; Cavus & Uzunboylu, 2009; Uzunboylu et.al, 2009; Manair, 2007; Maag, 2007). From the students point of view, mobile devices was more convenient and flexible (Clarke et.al, 2008; Cavus & Ibrahim, 2009; Bottentuit Junior, 2008; Al-Fahad, 2009).

Moving beyond those findings, this research investigated the use of handy device by integrating it to the classroom instructions, that is QR codes. In fact, the integration of QR Codes for classroom use has also been investigated by some researchers. Saprudin, Goolamally, and Latif (2014) explored the potential contributions of the Quick Response (QR) codes as teaching tools in an open distance learning institution with working adults as students. Observations and reflections from the tutor and the students were positive. It showed that QR codes could be contributive in the teaching and learning process.

Rikala and Kankaanranta (2014) also conducted a case study on the Quick Response (QR) codes and mobile devices in Finnish basic education. The objective was to explore how mobile devices and QR codes



blended in teaching and learning math. From the learners' point of view, the QR Codes activity was motivating and offered wanted variations to the traditional school activity. However, the two studies mentioned previously are not concern with English language teaching (ELT) context that will be the focus of the study.

Research on QR Codes has been conducted in various contexts, but there are only small portion of studies that addressed the use of QR Codes in ELT context. Rivers (2009) conducted a study to introduce three basic QR code activities in English as a Foreign Language (EFL) classroom with 132 university students in Japan. From the questionnaire, this investigatory project was set out to show how the merger of the mobile phone and the QR code is considered as a productive way forward in achieving a semi-ubiquitous computing environment. The attitudes of students as well as the advantages and disadvantages were discussed due to the implementation of mobile phone and QR code.

Ali, Santos, and Areepattamannil (2017) investigated the QR codes usage in the classroom activities and how the pre-service teacher perceived the integration. There were Forty-four pre-service teachers at a higher education institution in the United Arab Emirates involved in the study. The instruments were questionnaires, student journals and focus group interviews. The pre-service teachers perceived that QR codes were easy

ful in learning activities. They also showed positive attitudes towards
ementation of QR codes and stated their willingness to use this



application in the future. Beside providing practical ways of how QR codes integrated in teaching, It also revealed some challenges that could be threat in the integration of QR code applications in the classroom.

Huah and Jarrett (2014) conducted an action research about the use of QR codes and mobile phones in developing listening and speaking skills in the teaching of English Language to non-English Language option in-service teacher trainees and secondary school teachers. The idea was creating listening and speaking materials using recording feature in their mobile phones. The activity led to active learning, increased learners' interest and motivation.

Jeon (2015) in her study suggested that more research should invest in Technology Embedded English teaching models to create better English classes for students. She introduced two possible activities that can be used in the class. The first activity introduced in her study was an activity constituting writing sentences, attaching them to QR codes and then sharing with the teacher and other students. The second activity introduced in her study was writing description of photos and sharing them with other students using a QR code and it was introduced in a primary school English class on the EBSe 'The Best English Teacher' program. Moreover, she suggested that Introducing QR codes in the classroom can motivate students in learning and the activity of finding information about tasks and activities via

es can stimulate students' curiosity and inquiring minds.



Considering the previous studies that have been elaborated, the researcher tried to apply a SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis which is still rarely used for educational analysis or classroom analysis in particular. The researcher's decision to focus on the four aspects in this study is precedent to the integration of QR Codes in the classroom.

Madsen (2016) defines SWOT analysis as a framework for assessing strengths and weaknesses of a company's resources and also external market situation (opportunities and threats). A number of studies have shown that SWOT analysis is one of the most widely used strategy tools among managers. Panagiotou (2003, p. 8) predicted that SWOT analysis would become favorable techniques in the process of decision making.

B. Theoretical Background

1. Mobile Learning

a. Definition of Mobile Learning

Mobile learning (m-learning) can be defined as the process of learning by utilizing portable wireless devices such as mobile phones, personal digital assistants, smartphones, personal computers, etc., to achieve the flexibility and interactivity (Burkhaev and Altaher, 2017). It indicates that mobile learning may allow the learning process to be

ve and easily modified and adapted in certain situation.

he accessibility of learning can be achieved by utilizing mobile

Supported by the advancement of technology, the development of



multimedia in mobile applications has facilitated learners to have access to various learning resources. Lan and Sie (as cited in Ozdamli & Cavus, 2011) elaborated that mobile learning (m-learning) is such a kind of learning model allowing learners to obtain learning materials anywhere and anytime using mobile technologies and the Internet. In line with this, Yi et al. (2009) mentioned that m-learning is able to increase the learners' performance by making learning accessible.

As the learners have great access to wireless handheld devices such as mobile phone, wireless laptop, tablet, and personal computer, they are always able to get information about courses. Learners can share information, download materials, attend exam, and submit assignments. These processes are connected to the system hence the teacher can monitor the learners and teacher gets reports toward learner process. M-learning also facilitate 'just-in-time' learning which means that learners could often take advantage of unexpected free time as they frequently have their devices with them (Evans, 2008; Huang et al., 2010).

Another definition of m-learning is mentioned by Laurillard & Pachler (2007). They defined m-learning as the digital support of adaptive, investigative, communicative, collaborative, and productive learning activities in remote location. It allows the teacher to operate various environments in teaching learners. In addition, through m-learning people

learn or stay connected with their learning environments including



their classmates, instructors, and instructional resources while going mobile (Yi et al, 2009)

b. Basic Elements of Mobile Learning

Mobile learning is supported by several elements. Ozdamli & Cavus (2011) explained that m-learning consists of several basic elements. These elements are explained as follow;

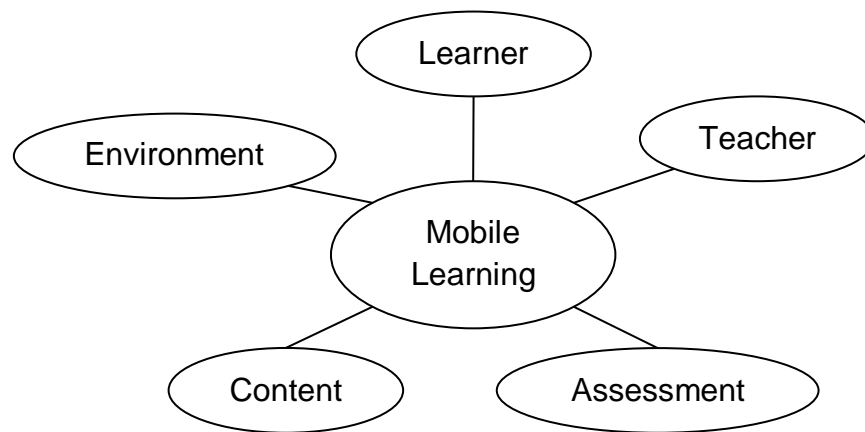


Figure 1. Basic elements of m-learning

1) Learner

Since learners are the focus of all teaching and learning activities, all the other elements of m-learning serve to the learner. Mobile learning builds on the learner's interests, experiences and needs. Makoe (2010) claimed that as the mobile learning concept implies, the pedagogical approach places the student at the center of the learning process. The learner plays

the role from determination of the goals until the evaluation stage.

These roles are giving below:



- a) Access information when they need
- b) Responsible for own learning
- c) Learning with their learning speed
- d) Discover and use their learning styles
- e) Create and share new information or product
- f) Study with their peers collaboratively
- g) Evaluation themselves and other groups

2) Teacher

In conventional learning environment, book as media store information and teachers convey it to students. On the other hand, recently technology is used for storing information, supporting more accessible information for students. According to Halis (2002) this situation created a new dimension opposed to traditional teacher role about information search and use.

3) Content

Content is one of the elements of m-learning. The element of content covers issues that expected to learn by students. Content should be decided in consultation with all stakeholders such as learners, teachers, parents etc. Otherwise teachers cannot get the desired results. Learning content must enable a user to quickly zone into needed information. In addition, the content can be presented with interactive games or quizzes. Content should

with graphics video and other multimedia elements. (Ozdamli & 2011).



4) Environment

In order to create positive learning experiences, environment in which the students gain information must be designed properly. Environment must support the interaction between students-students and students-teachers. The social networks or blogs can be used for increase social interaction. This environment must be designed available for mobile phones, laptops and other mobile tools (Ozdamli & Cavus, 2011)

5) Assessment

Assessment is an essential elements of the complete m-learning. Since technology provides opportunity for teachers to access students' performance , the evaluation and report should be provided via data base logs, online examinations, software packages, chat room, or project evaluation. Also students should evaluate themselves and others. It provides the pieces needed to accurately evaluate a learner's knowledge, skills, creativeness and etc. Sharples et al. (2005) described that assessment is matched to the ability of the learners, offering diagnosis and formative guidance that builds on success. According to Behera (2011) the assessment should help the learner clear all his doubts based on the course and at the same time, learn a little bit more about the same.

A good designed course should provide immediate feedback so that

ner is able to judge how well he has understood the content of the

The feedback shouldn't be such that it discourages the learner and



makes him/her feel like he/she doesn't know anything. A feel good factor is very important for the learner after he takes the course along with the assessment.

c. Educational benefits of employing mobile learning in teaching and learning

Burkhaev and Altaher (2017) mentioned several advantages of implementing mobile learning in teaching and learning. These advantages can be taken by both teachers and students. For teachers, mobile learning facilitates their tasks. Teacher can use the Short Message Services SMS to obtain information more easily and faster than telephone or e-mail conversations such as lectures appointments or tests tables, especially with an emergency amendment to these tables (Burkhaev and Altaher, 2017) Also, learner can get through which the information is easier and faster than telephone or e-mail conversations such as lectures appointments or tests tables.

Since learning can be at anytime and anywhere, learner can communicate freely with the teacher at any time ask questions and receive answers easily, and the exchange of letters between the learners themselves, and between them and the teacher both on educational or social matters. Moreover, students can interact with each other and with the teacher rather than hide behind the big screens, large monitors.



Codes

Definition of QR Codes

The Quick Response (QR) Code is a 2-dimensional symbol invented by Denso Wave in 1994 (DENSO ADC, 2011). A piece of long multilingual text, a linked URL, a business card or just any information can be embedded into the two dimensional barcode. It is readable with moderately equipped mobile devices, QR codes can connect the users to the information quickly and easily. The following is an example of the 2-dimensional QR barcode.



Figure 2: An example of a Quick Response (QR) barcode

What message is embedded in the QR code shown in Figure 1? If the mobile phone has the capability to download a barcode scanner, once the code is scanned, the message will read as:

“The Application of QR Codes in English Language Teaching at

Vocational High School

(Case Study at SMK Negeri 1 Wajo)”



R-Codes in Educational Settings

The study of QR codes in education can be placed in the context of mobile learning. However, QR codes are not designed in educational terms. These two-dimensional barcodes were originally intended for tracking automobile parts in factories but nowadays they have a much broader purpose (Shin et al., 2012). QR codes have become widely popular because they provide a large amount of data comparatively quickly. QR code scans contain information such as text, URL links, or other data that can direct users to sources of further information about a particular place or subject. Users with a camera phone equipped with a QR code reader application and Internet connection can scan QR codes to display text, open a web page, get GPS coordinates, or perform some other similar action (Lee et al., 2011).

Because QR codes are not designed in educational terms, it is important to see the technology as an enabler. The aim is to explore how QR codes can be effectively integrated into teaching practices, which means the focus should therefore be more on the learners and pedagogy than on the technology itself. For this reason the use of the codes should promote learner-centered learning, not bind teaching and learning to mobile technology (Zhang et al., 2010).

QR codes can meet the needs of learners in a range of ways. First, it is possible to enrich paper-based materials to serve different types of

(Chen et al., 2010). For instance, QR codes in paper-based tasks can contain links to multimedia resources such as audio materials or video



clips. Law and So (2010) noticed that having the codes in paper-based tasks provide an efficient and flexible way for students to obtain their sources ubiquitously. Second, QR codes can guide learners through the self-assessment process. Law and So (2010), for instance, used the codes to guide learners through the self-assessment process. The QR code printed on the worksheet directly linked to a web page with the right answers and guided the learners through the individual exercises. The same kind of self-assessment process was observed in study by Rikala and Kankaanranta (2012). Teachers can also give directions and information to students on how to complete their assignments. In art workshops, QR codes can be placed, for example, on pieces of equipment such as different kinds of brushes, or in an engineering workshop on different electronic equipment to guide students in their use. Rikala and Kankaanranta observed a situation where QR codes guided students in how to use gym equipment. Third, QR codes provide a flexible way to share materials. Robertson and Green (2012) reported on how learners can find pictures of famous figures and generate a code for that figure. Learners can also produce and share reports or other materials online. In Rikala and Kankaanranta students shared their reports with others as a way of guiding the students' self-assessment process. When the focus is on learners, the use of the codes supports learner-centered learning and enhances students' motivation and

ent. Rikala and Kankaanranta also noted that students were curious
e new approach and that they found QR codes motivating.



The impact of interaction on learning cannot be underestimated. The philosophy of social constructivism, for instance, views learning as collaborative and it emphasizes social interaction (Koole, 2009). The social aspect of learning can also be enhanced with QR codes. In the studies by Susono and Shimomura (2006), Chaisatien and Akahori (2007) and Al-Khalifa (2008), students used mobile phones and QR codes to send questions, comments and suggestions to the teacher during the lecture. Al-Khalifa (2008) argued that with a QR-code based system students can ask questions and make comments without embarrassment. At best, this approach supports communication and information transfer. QR codes can also support the implementation of systems based on the collaborative learning paradigms, among others (De Pietro et al., 2012). Trail activities, for example, can be organized in as a collaboration or a competition between students (Law and So, 2010).

QR codes are very versatile. Lee et al. (2011) found that with QR codes, teachers can create customized guide books for individual field studies and that students can learn more effectively because the code only contains information that is relevant to the matter at hand. They furthermore noticed that QR code activities help integrate digital materials with field trips in a motivating way. In other words, QR codes support a variety of teaching practices.

However, the use of QR codes in education is still in its infancy. The feedback from the teachers is that the planning of QR activities is an



arduous task if one does not know how to utilize them, because it simply takes too much of the teachers' time and energy to organize QR activities (Rikala & Kankaanranta,2012).

c. Using QR-Codes for Teaching

There are some ways teachers can use QR codes for educational purpose. The potential of QR-Codes can be used as the followings:

1) Book Reviews

One of the best ideas for using QR codes is in the school library. QR codes are created for the books which links to reviews, trailers, or additional resources. The QR codes are then attached inside the cover of the book. This can make learners scan the bar codes easily and picture out more about the book before they decide to read it. Further, this concept is applicable in promoting students to try to create their own book reviews. The content can then posted to the class blog or wiki and linked to the physical book via QR code. This is a great way for students to interact on both ends of the technology and have their work reach a broad and diverse audience.

2) QR Code Orienteering

An orienteering is a classroom activity where students scan a series of codes which is design as a virtual treasure map. The concept is similar to

hunt where every code scanned will unfold a clue to find the next, in digital form. This activity is a good way of combining technology



with a bit of physical exercise and problem solving skills. Having this activity applied aims to engage students and to create fun classroom atmosphere. Designing a set of sequence does require a amount effort of planning and work, there are tools available for creating a QR treasure hunt, and it is quite simple to use.

3) Multimedia Content

The most popular use for QR codes in education is to transform multimedia content to two-dimensional picture. Using this feature, it is likely possible to use fully digitized textbooks and worksheets. In English language learning, for example, lessons unit about certain grammar rules from a book can be replaced with QR codes. The QR codes links to a YouTube video, web page, or other platforms discussing the lessons unit.

4) Solutions and Tutorials

QR codes is a modern version of answers keys being written in the back of the book. The answer keys is transform into QR codes. Before using the code to review the correct answer by scanning codes that link the answers of questions online. This will provide learners with more practical and more fun activities in attempt to look for solutions during learning process. In the other word, this novel way facilitate students to look up answers instead of finding it in written textbook which is more effortful. This is also help teachers to use interactive media in presenting solutions in a

comprehensive and engaging manner.

DT Analysis



SWOT Analysis is a tool used for strategic planning and strategic management in organizations. “It is a simple but powerful tool for sizing up an organization’s resource capabilities and deficiencies, its market opportunities, and the external threats to its future” (Thompson et al., 2007). It can be used effectively to build organizational strategy and competitive strategy. In relation with system approach, organizations are wholes systems that interact with their environments and consist of various sub-systems. In this sense, an organization is as two form of environments, one being in itself and the other being outside. Hence, it is a necessity to analyzing the environment for strategic management practices. This process of assessing the organization and its environment is known as SWOT (Strengths, Weaknesses, Opportunities, and Threats) Analysis.

SWOT analysis was initially created for business and industry. However it can be also implemented in the work of group wellbeing and improvement of education and even for self-awareness (Hussain, et al., 2016). SWOT method can be used during the design, development and implementation stages of any project including in education field. It is also a convenient tool for the evaluation stage in order to have an initial idea of the future consequences.

SWOT analysis was developed in the Harvard Business School in the mid 60’s. Classroom discussions in the Harvard business policy course

focusing on comparing a company’s strengths and weaknesses with opportunities and threats that the company faced in the marketplace.



This framework was designed as a major step forward in bringing explicitly competitive thinking for strategic needs. Kenneth Andrews of Harvard Business School conceptualized these elements together in a way that became particularly well known with the acronym SWOT (Ghemawat, 2002: 43).

According to Andrews (1971), strategy development includes defining the opportunities and threats in the environment of the organization, and identifying the possible risks for strategic alternatives. The organization must know its strengths and weaknesses before making a choice among the alternatives. The organization potential should be harmonized with the opportunities defined objectively. The most suitable strategy is the one that enables the best harmony between the environmental opportunities and the sources of the organization.

SWOT Analysis is a process that involves four components: 'Strengths', 'weaknesses', 'opportunities', and 'threats'. Strengths and weaknesses are internal factors and attributes of the organization, opportunities and threats are external factors and attributes of the environment. Liao (as cited in Hussain, et al., 2016) elaborated parts of SWOT investigation as follows:

1. Strength (S) is examination of quality of circumstance or condition that an association or organization reveals. This investigation is

about evaluating the qualities and shortcomings in contrast with its rivals. For example, if the quality of organization is excellent in their



innovation, this area of preference can be explored to fill a business sector fragment that requires a level of innovation.

2. Weakness (W) is investigation of shortcoming that an association or organization possesses. This investigation aims to break down the possible drawbacks in an organization or association that likely hinder in the development of an organization or association.
3. Opportunity (O) is investigation of chance of circumstance or condition that extend chances from outside of an association or organization and gives the chance of development to the association later on. This investigation aims to search for circumstances that allow an organization or association to grow up.
4. Threat (T) is investigation of negative circumstance or condition that an association or organization confronted. This investigation is to break down the test or danger that must be confronted by an organization or association. The type of threats includes natural variable that did not good to an organization or association which come to be reason for crumbling. In the event that did not soon be succeeded, the risk would be an obstruction for a business concerned at present and what is to come.

SWOT analysis was initially created for business and industry however it can be also implemented in the work of group wellbeing and

ment of education and even for self-awareness (Hussain, et al., SWOT method can be used during the design, development and



implementation stages of any project including in education field. It is also a convenient tool for the evaluation stage in order to have an initial idea of the future consequences.

C. Conceptual Framework

The research focuses on exploring the strengths, weaknesses, opportunities, and threats (SWOT) of the implementation of QR Codes in English language teaching in the context of vocational high school. The research conducted by introducing the concept of QR Codes to teachers and students. The QR Codes then implemented by integrating it to some classroom activities. In exploring the SWOT of the implementation of QR Codes, the researcher use triangulation technique to gain as much as data from various sources such as teachers, students, school principals, and etcetera through interview and observation.



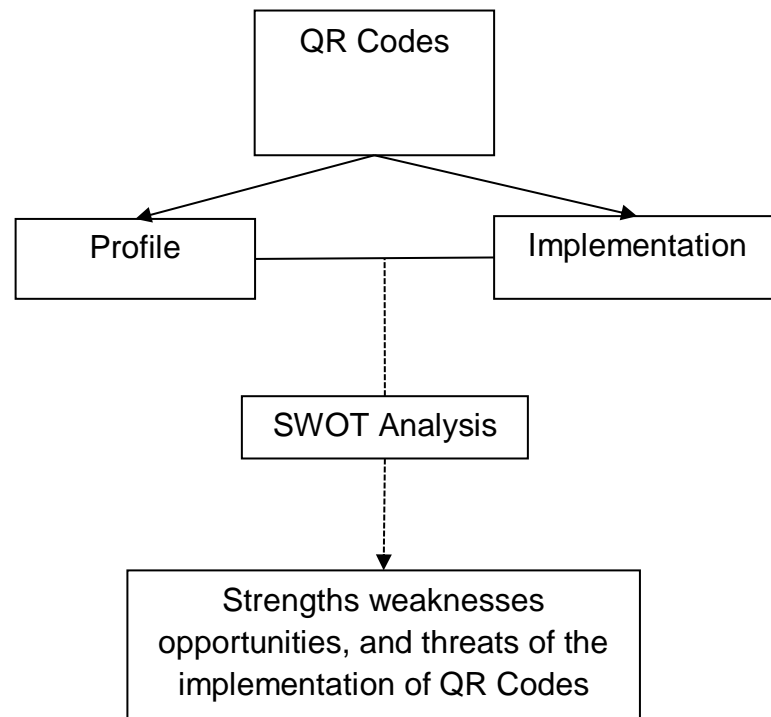


Figure 3. Conceptual Framework

