The role of *patik bali* (Balinese keyboard) on smartphone with Android operating system

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Abstract. Balinese is a regional language used in Bali island. Balinese has a letter called Balinese script. Balinese script consists of 2 letters. It is different from alphabet consisting of 1 letter. Balinese script is divided into sound script and *wianjana* script. Along with the times and advances in technology, especially in the field of communication, the interest of the younger generation to learn Balinese language, especially Balinese script, is getting lower. Therefore the programmers view an opportunity in the world of technology to preserve Balinese language, especially Balinese script. Several applications to write Balinese script on smartphones are developed. Android is one of the operating systems used on smartphones based on Linux. Implementation of the *PaTik Bali* (Balinese Keyboard) application in the Android operating system is limited in the kitkat version. The appearance of *PaTik Bali* (Balinese Keyboard) uses an interface layer that can accommodate the overall character of Balinese characters. The roles of the Bali PaTik (Balinese Keyboard) application for Balinese people are: 1. Facilitating the writing of Balinese script on smartphones, 2. Preserving the local language, especially Balinese script with a blend of technology, 3. Increasing the interest of the community to learn Balinese script.

1. Introduction

Regional language is a cultural heritage from ancestors inherited from one generation to the next generation. Based on the Government Regulation of the Republic of Indonesia Number 57 of 2014 Article 6 paragraph 1 and 2, the regional language is a very important language as the identity of a region and as a medium of social communication in each region [2]. Balinese is a regional language used in Bali island. Balinese has a letter called Balinese script. Balinese script consists of 2 letters. It is different from alphabet consisting of 1 letter. Balinese script is divided into sound script and *wianjana* script. The sound script consists of 10 vowels while the *wanjana* script consists of *kantia*, *talawia*, *murdania*, *dantia*, and *ostia*. Balinese script has various rules and uniqueness, so it must be studied seriously.

Along with the times and advances in technology, regional languages began to be rarely used, especially in urban areas. The types of technology are, 1. Communication technology, 2. Construction technology, 3. Medical technology, 4. Information technology, 5. Business technology. Technology helps many people in carrying out their daily activities both in the field of work and education. Technology that is developing very rapidly is technology in the field of communication. The
development of communication technology makes each person or community can relate or communicate without being limited by distance and time [4].

In the beginning, communication technology used by humans was a telephone that was installed in homes and which belonged to rich families. The telephone develops into a mobile phone or called a cellphone that can be carried anywhere with the same function as a landline but there are additional features such as sending messages. Communication technology is growing rapidly in the digital era with the smartphone which is a development of mobile phones that carry touch screens and have more sophisticated features such as the use of 2G and 3G networks, and now 4G network has also been used to speed up the process of sending data with internet usage, this makes smartphone as the main choice of society in its use in life.

Smartphones can be used to access the internet quickly and can be used to work on various activities such as editing videos, photography, recording sound, watching videos, communicating face to face, listening to music, uploading photos and videos on social media, and many other uses. Therefore, the use of Indonesian and foreign languages is a very popular language in modern era, because in various devices, especially smartphones, they use Indonesian and foreign languages. Therefore the programmers view an opportunity in the world of technology to preserve Balinese language, especially Balinese script, so they develop several applications to write Balinese script on smartphones. One of them is the Bali PaTik (Balinese Keyboard) application.

2. Discussion
The Studium Generale held by Hindu Dharma Institute of Negeri Denpasar on June 7, 2018 explains that PaTik Bali (Balinese Keyboard) application is designed by several programmers namely Ida Bagus Ary Indra Iswara, Putu Praba Santika, and I Nyoman Saputra Wahyu Wijaya. It can be used on smartphones with android operating systems. Android is one of the operating systems used on smartphones based on Linux. The Android operating system gives an opportunity for developers to create their own applications for various devices [1].

Android is chosen because most smartphones in Indonesia use Android operating system more than IOS, Symbian OS, RIM BlackBerry, Windows Mobile, Palm, WebOs, and Linux. Android was originally developed in 2007, namely Android Beta. Along with its development, Android has several versions including:

a. Android Astro 1.0 which was launched in 2008. Because of problem regarding copyright, Astro is not used.

b. In 2009 android released its new version, namely Android 1.1 (Bender). Because of violating the trademark, Bender is also not used.

c. Android 1.5 called Cupcake is the name of the first version of Android by adding several new capabilities such as being able to upload videos to the youtube application, as well as widgets that make it easier for users to operate the smartphone.

d. Android 1.6 called Donut released after four months of the release of Cupcake Android, its superiority in the field of batteries, using CDMA connections, and supporting the screen with WVGA resolution.

e. Android 2.0 or 2.1 called Eclair succeed to change the mindset of gadget entrepreneurs about touch screen mobile phones by optimizing Google Maps hardware, supporting flash on the camera, and updating features such as contacts and bluetooth. Next

f. Android 2.2 called Froyo (Frozen Yoghurt) has developed its operation by being able to add the amount of memory using external memory.

g. Android 2.3 called Ginger Bread adds some features such as dual cameras and video calls to be able to communicate face-to-face and in this version Android improves the quality of the screen when playing games on a smartphone.

h. Android 3.0 or 3.1 called Honeycomb is used on smartphones with larger screens and was introduced in 2011.
i. Android 4.0 called Ice Cream Sandwich was introduced in the same year as Honeycomb (2011) provides face detection, photography, video and graphic quality features that spoil users.

j. Android 4.1 called Jelly Bean enhances the keyboard feature to make it faster in use and add voice search in data search.

k. Android 4.2 called Jelly Bean updates its photography features by adding panoramas, screen lock applications with widgets, running multiple applications on one device (tablet), daydream as screen savers.

l. Android 4.3 called Jelly Bean is an updated version of the previous version released in 2013.

m. Android 4.4 called Kitkat was firstly called Key Lime Pie. Because it was felt very few people knew the taste of Key Lime Pie so that its name was changed to Kitkat.

n. Android 5.0 called Lollipop is the latest and stable version released with version 5.0 and 5.1 in 2014. Changes made on Lollipop android are on interfaces made with design material design. In addition, notifications can also be seen from the lock screen displayed on the banner at the top of the screen and the addition of battery capacity.

o. Android 6.0 called Marshmallow, has no many differences from the previous one. There is an addition of some features such as fingerprints and battery life that allow full day use without recharging.

p. Android Nougat with the version introduced in 2016. A fundamental update on this version is the existence of Google Assistant which replaces the use of Google Now. This feature can be used for various functions. The addition of other features in the form of split-screen when using more than one application that already exists in version 6.0

q. Marshmallow is renewed again [3].

Based on the development of android, the implementation of the PaTik Bali (Balinese Keyboard) application in the Android operating system is at least in kitkat version and the latest android version, while the previous version cannot use the PaTik Bali (Balinese Keyboard) application on the smartphone. The appearance of PaTik Bali (Balinese Keyboard) uses an interface layer that can accommodate the overall character of Balinese characters.

These are the steps to activate and use PaTik Bali (Balinese Keyboard)

a. Install the PaTik Bali (Balinese Keyboard) application on a smartphone with an Android operating system,

b. Open the application, press the third point on the top right corner,

c. Activate PaTik Bali (Balinese Keyboard),

d. Press the back button, and return to the PaTik Bali (Balinese Keyboard) screen,

e. Press the point on the top right corner,

f. Press change to PaTik,

g. Choose PaTik Bali (Balinese Keyboard).

The PaTik Bali (Balinese Keyboard) application can be used in all applications.

Figure 1. Patik Keyboard
The roles of the PaTik Bali application for Balinese people are:
   a. Facilitating to write Balinese script on smartphones
   b. Preserving regional languages, especially Balinese script with a blend of technology
   c. Increasing public interest in learning Balinese script

Based on the roles of the PaTik Bali (Balinese Keyboard) application, it is indicated that it has disadvantages.
   a. There is no translation of under Balinese script so that people who are lay in pairing script will be unable to use it
   b. There are weaknesses in writing the sound scripts, either hangers and pending customers,
   c. PaTik Bali (Balinese Keyboard) application can only be used on Android operating systems.

3. Conclusion
The impact of smartphone usage that has been spread out in the community, especially on the younger generation causes a lack of real interaction and the interaction with many foreign languages has resulted in lower use of regional language in everyday life due to the attractiveness of learning regional languages such as Balinese language and low Balinese script. The PaTik Bali (Balinese Keyboard) application is one of the applications to facilitate users of learning Balinese script on smartphones. This is chosen as a solution and a special attraction for people in modern era to keep in mind and preserve the culture that has been inherited by their ancestors. The Android operating system is chosen in using PaTik Bali (Balinese Keyboard) application because its usage is more dominant than other operating systems. The weaknesses contained in the PaTik Bali application are due to the limited script font provided by Android so that it cannot provide the maximum appearance and service to the android users.

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