An On-Line Japanese Handwriting Recognition System integrated into an E-Learning Environment for Kanji

Steven B. Poggel
steven.poggel@gmail.com

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Chapter 1

Conceptual Design of Kanji-Coach

1.1 Requirements of a Kanji Teaching E-Learning Application

Wichtige Fragestellung: Wie sieht eine HWR in Lernumgebung aus? Mappe S. 19 genaue anforderungen s. 19! waehle bestimmte architekture unter moeglichen ansaetzen.

s. 12 beachten: WICHTIG: lernkomponenten, muss kein ganzes system sein.

1.1.1 Classification of a Kanji Teaching Application

1.1.2 Conceptual Issues for E-Learning of Kanji

If e-learning is considered as a learning method in higher education, *blended learning* seems to be the most suitable form of e-learning. That means, combining classroom activities with e-learning methods (Hettinger 2008; Kahiigi et al. 2008).

Many efforts in designing e-learning applications are focused around the teacher's view on learning. For designing an e-learning application that is useful to students, the students view needs be taken into account (Alexander and Golja 2007).

Ivašin (2009) critisises the technical dominance in e-learning and e-teaching processes, as the conceptual software designs are not always supporting the didactic purpose of the software. Therefore, the user view should be taken into account when conceptually designing an e-learning application.

For online e-learning, it is a known that readers only scan the textual information displayed. Therefore it is not useful to provide a user with large blocks of text, but rather with smaller chunks that encourage skimming over (Hamid 2001).

(Stahlmann 2004) spezielle aspekte bezueglich han-trainer pro

1.2 Approaching the Specific Difficulties of the Japanese Script

1.2.1 Character Learning Aspects

- greife typische probleme der lerner auf (siehe japanischkapite **??**) s. 11 hinten kurze auflistung. geschichten?

1.2.1.1 Character Repetition

In section **??** the pure repetition of grammatical structures as a learning method has been critisised. The system should account for that by not just forcing the user to reproduce fixed structures. In fact, it should leave room for creativity. Zum Beispiel - radikale vorgeben und zeichen schreiben lassen. und ganz generell: toleranzgrenzen erlauben kreativitaet allein schon deswegen, weil selbst der zeichenstift benutzt wird.

1.3 Integration of HWR Into the Learning Process

welche art von character recognition muss geleistet werden?

was sind die moeglichkeiten (im vergleich zu anderen produkten), die sich durch eine HWR ergeben? wie kann man die ausschoepfen? s. 16 unten und s. 15

Error Recognition what type of errors? semantical errors? cow vs sheep vs pig phonological errors (readings) kanji that sound the same. theoretically: compounds - for the kanji readings. heft: s. 52

- compare with normal paper-based learning of kanji - compare with other kanji-learning systems klare abgrenzung von skritter. s. 51 unten im heft.

1.4 Handling Errors

1.4.1 Motivation for Error Recognition

1.4.2 Possible Sources of Error When Writing Japanese Characters

error handling, see page 58.

See notes on paper, seite 58 - for example stroke number and stroke sequence - length of strokes - stroke velocity

1.5 Use Cases

siehe 'screenshot' - grafiken von s. 2 - 9 auch: was kann man aus e-learning machen? welche (technischen) moeglichkeiten sind eroeffnet, insbesondere auch durch handschriftenerkennung?

idee: schoenschreibekurs, bei dem einzelne striche gesondert geuebt werden.

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References

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