



MORE FUN, FEWER RISKS: DEVELOPMENT OF A GAMIFIED WEB APP FOR RISK MANAGEMENT

STUDIENARBEIT

des Studienganges Informatik an der
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von

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Abstract

Erklärung

(gemäß §5(3) der "Studien- und Prüfungsordnung DHBW Technik" vom 29.09.2017)

Ich versichere hiermit, dass ich meine Studienarbeit mit dem Thema: "More Fun, Fewer Risks: Development of a Gamified Web App for Risk Management" selbstständig verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel benutzt habe. Ich versichere zudem, dass die eingereichte elektronische Fassung mit der gedruckten Fassung übereinstimmt.

Ort, Datum

Unterschrift

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Glossary

Item Name description

1. Introduction

context, motivation, aims, purpose, ..

Latex Cheat Sheet: Bildquelle mit Seite:Quelle normal:

Bilder normalerweise: Bild über den Seitenrand vergrößern und mittig ausrichten:



ABB. 1.1.: *Title*

[]

Fancy quotes:

// cite

//

TEXT []

Tabelle:



ABB. 1.2.: *Title*

[]

| Spalte1Titel | Spalte2Titel | Spalte3Titel |
|--------------|--------------|--------------|
| 1 | 3 | 5 |
| 2 | 4 | 6 |

TAB. 1.1.: *Unterschrift*

LISTING 1.1: *Title*

```
1 print("Hello world")
```

2. Theoretical background

text...

2.1. Risk Management

Fische [WetterAktuellWettervorhersage2019]

2.1.1. Unterkapitel

2.2. Gamification

The following chapters aim is to clarify the main theory behind human motivation, gamification and the corresponding patterns and methods. Therefore first of all the term Gamification is defined and explained (chapter 2.2.1), furthermore there is an introduction to human motivation (chapter 2.2.2) and motivational patterns (chapter 2.2.3). TODO REST

2.2.1. Definition Gamification

The term gamification is defined by Kumar and Herger as follows:

“ Gamification is the application of game design principles and mechanics to non-game environments. It attempts to make technology more inviting by encouraging users to engage in desired behaviors and by showing the path to mastery. From a business viewpoint, gamification is using people’s innate enjoyment of play. ”

GAMIFICATION [2, P. 8]

Further definitions are TODO

[2, p. 8]

More umfassender: Motivation -> next chapter(s)

Gamification aims to motivate the user to do something. That’s why the next chapter provides a more comprehensive introduction on motivation.

2.2.2. Motivation

The game design principles and mechanics which are used in the context of gamification are a specialization of motivational patterns used in Human Computer Interaction. [2, p. 59]

Therefore this chapter provides an introduction into the underlying psychology of motivation, different types of motivation (extrinsic and intrinsic) and TODO!?

Human motivation is one of the main areas of psychology. Some questions which arouse are: What motivates humans for doing something? TODO: weiter Fragen (aus Quelle) [1, p. 1]

TODO: weiter nach bierhoffeditorEnzyklopaediePsychologieSoziale2016 und inproceedings
Selbstbestimmungstheorie nach Deci und Ryan (Autonomie, Fähigkeit, Zugehörigkeit)

=== To dive into the topic of human computer interaction ===

Psychologie (was motiviert allgemein) -> übertragen auf die Mensch-Maschine-Interaktion =
Human Computer Interaction (Wie agiert der Mensch mit dem Computer/der Maschine)

2.2.3. Motivational Patterns

Motivational Patterns -> hier auch Flow, ... aus bierhoffeditorEnzyklopaediePsychologieSoziale2016

2.2.4. Gamification best practices and process TODO!?

Gamification Methods (Player Centered Design, Mechanics, ...)

2.2.5. Gamification and motivational methods and patterns in business software TODO

(u.a. behavioral economics)

2.2.6. Risks of Gamification

Risks of Gamification (u.a. Korruptionseffekt, "Overfitting???", Source: Does Gamification Work? — A Literature Review of Empirical Studies on Gamification)

2.3. PWA

text..

2.3.1. Unterkapitel

3. Domain description

text...

3.1. Survey

3.1.1. Unterkapitel

3.2. Domain Model

3.2.1. Unterkapitel

3.3. Gamification concept TBD

3.3.1. Player Personas

Player Personas based on survey -> Player Centered Design <https://www.interaction-design.org/literature/book-at-work-designing-engaging-business-software/chapter-3-58-player>

3.3.2. Mission

Mission

3.3.3. Motivation + Mechanics

not only gamification patterns, but also basic motivational patterns => concrete conception of used patterns

3.3.4. Evaluation

Evaluation To measure if methods of gamification and motivational patterns influence the user's behavior -> Tracking and A/B-Test Version A: gamified Version B: not gamified

4. Software Specifications

4.1. Technologies

4.2. Requirements

4.3. Use Case Specifications

4.4. Architecture

5. Implementation

5.1. Unterkapitel -> Design, Evaluation, Methodisches, PM, ...

5.2. Unterkapitel2

6. Discussion

7. Conclusion and Outlook

List of references

- [1] Hans-Werner Bierhoff (editor) and Dieter Frey (editor). *Enzyklopädie der Psychologie: Soziale Motive und soziale Einstellungen - Sozialpsychologie 2*. 1st ed. Vol. 2. 3 vols. Die Enzyklopädie der Psychologie Themenbereich C, Serie VI. Göttingen: hogrefe, 2016. ISBN: 978-3-8444-0564-0.
- [2] Janaki Kumar and Mario Herger. *Gamification at Work: Designing Engaging Business Software*. 1st ed. Denmark: The Interaction Design Foundation, 2013. 157 pp. ISBN: 978-87-92964-06-9.

Appendix

A. Anhang1

VI

A. Anhang1