Persuasive Systems to Support Behavior Change in the Context of Higher Education

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Abstract. The ongoing digitization of education and the accompanying requirement for self-direction exacerbates the long-standing problem that students in higher education lack self-regulated learning (SRL) skills. Here, Behavior Change Support Systems (BCSS) can provide students with missing guidance for improved learning behaviors and could therefore serve as a low-barrier intervention. But while such systems are established in the health context, deep research regarding their effects on students in higher education is missing. As the design and effectiveness of BCSS are strongly context-related, there is demand for investigation of their effects in a higher education context. This study introduces and evaluates a BCSS towards SRL. Using the perceived persuasiveness questionnaire, the study identifies multiple significant correlations with the perceived persuasiveness of the BCSS. Combining these results with the persuasive systems design model for BCSS design, we propose to further explore the design principles of the categories primary task support and dialogue support.

Keywords: Behavior Change Support System, Persuasive Technology, Self-regulated Learning.

1 Introduction

The progressive digitization of higher education and the resulting flexibility of learning. increasingly exposes students to problems in regulating their learning [1, 2]. Students with insufficient self-regulated learning (SRL) competencies run the risk of falling into a vicious cycle of failure [3]. SRL training can counteract negative consequences and alleviate perceived stressors [4], but struggling students, in particular, do not seek support or advice [3], due to a normalization of high-stress levels [5, 6] and high perceived barriers [6, 7]. Persuasive technology (PT) may function as a low-barrier addition to academic education. PT is established in the health context and successfully supports users towards a healthier lifestyle [8]. Here, PT provides missing guidance during behavior change processes that are typically self-directed [9]. As this is similar to students challenge towards an improved learning behavior, PT offers great potential and easily

improved learning behavior is lacking [8, 11]. When developing new BCSS, their design and success are strongly context-related [12, 13]. This ma

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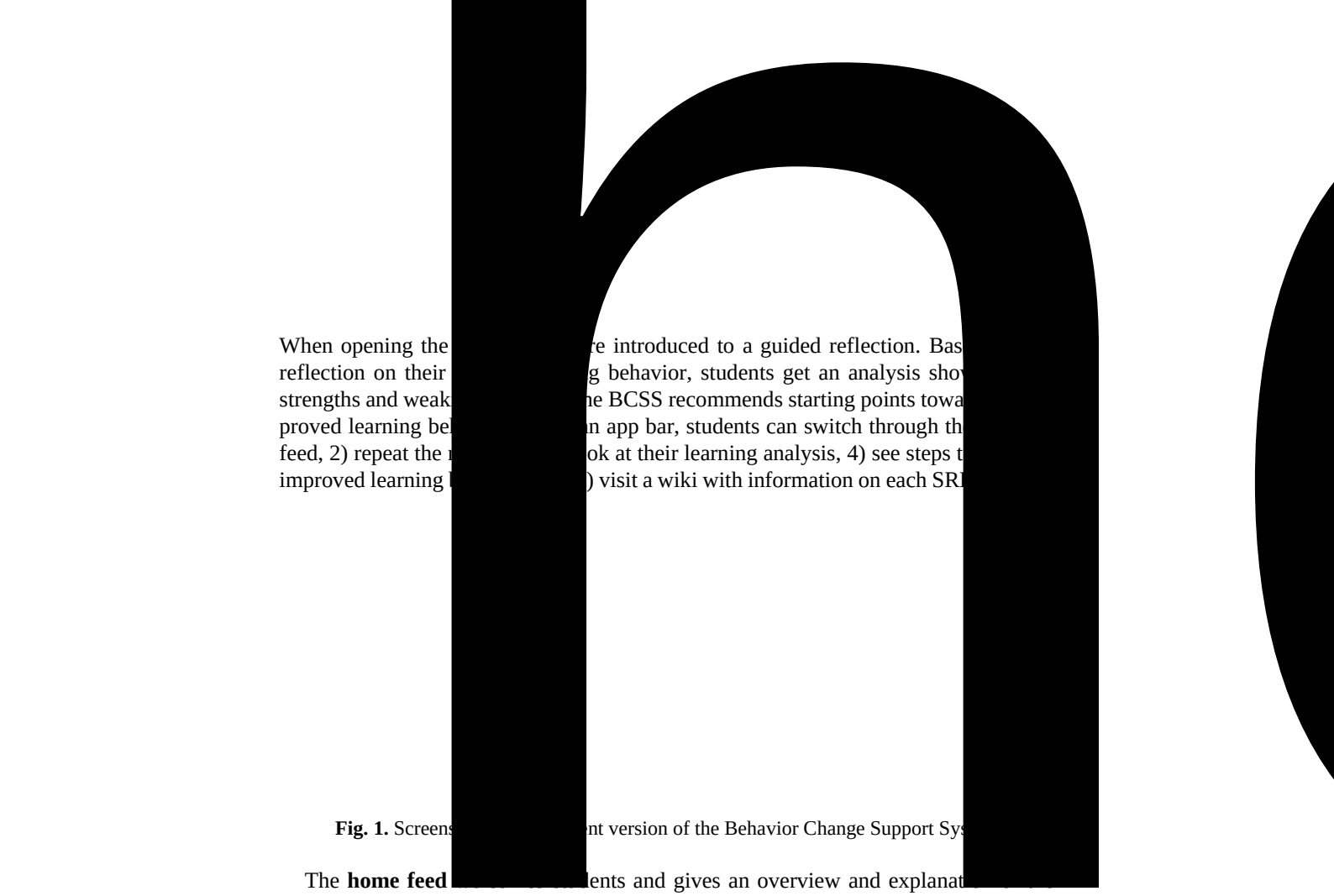

Fig. 1. Screens nt version of the Behavior Change Support Sys

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