Design and development of a Service System for fostering student´s attachment security: a Content Management System based Approach

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Abstract—Attachment security is major to students' social, cognitive, and emotional competencies. Students that experience secure attachments (mostly in early childhood between child and parents, but also in school relationships with teachers) fulfill their goals and objectives much more effectively and efficiently, are more engaged with their ecosystem, and run lower risks of individual breakdowns, i.e., an early school dropout. Attachment has not yet sufficiently permeated educational systems. Within this paper at hand, we present our approach to fostering students' attachment security. At the centre is the design and development of a tailored service system, a Content Management System that addresses the relational attachment of students to their teachers. Based on the contextual environment (the Attachment Theory) and the theoretical underpinning (Service Science), we apply the research method of Design Science Research to analyse and evaluate as well as to recommend a CMS for this purpose. In doing so, two analyses have been performed: a framework-based analysis and a Service Science related analysis.

Keywords—Attachment Theory, Attachment Security, Service System Design and Development, Content Management System

I. INTRODUCTION

The European Commission's Education and Training Monitor ([1], [2]) shows that one out of five European students has low academic achievement rates in, for example, mathematics (22.9%), reading (22.5%), and science (22.3%). In addition, 10.2% are early leavers from education and training, especially when foreign-born (22.2%). Academic underachievement and early school dropout continue to concern the European Union and its member states. Pupils and students who have not completed their schooling or studies pose a major problem. Politicians, such as Andrea Nahles, the Head of the German Federal Employment Agency, call for reducing the number of people without a degree (i.e., 47.000 in 2021 in Germany [3]).

Low attachment security is a root cause of underachievement, disengagement, and school dropout. Students build their sense of (in)security from their relational experiences with significant people in a multi-systemic framework involving the personal, relational, community, and political determinants. Attachment security is part of the attachment theory, i.e., [4], [5], formulated more than seven decades ago. Nevertheless, Attachment Theory has not yet sufficiently permeated education – it can be explored as an explanation and a strategy to address these educational challenges. The research motivation for this scholarly paper at hand lies in this research gap.

In doing so, we applied for and were selected positively for funding by the European Commission, call: HORIZON-CL2-2021-TRANSFORMATIONS-01, project: Let's Care, project number: 101059425. This project's main objective is to foster safe learning, safe teaching, safe schools, and safe education as an ecological strategy for fighting against underachievement, disengagement, and school dropout as well as breaking the transgenerational transmission of educational and social exclusion.

On the one hand side, within the Let's Care project, we aim to explore and enhance students' attachment security from four ecological levels. To this purpose, the Let's Care project will create universally replicable educational training for professionals with an attachment-centered approach, individualized and automated solutions in the field of educational intervention based on safe educational practices, a network of support, partnership, and exchange of resources for the academic community, as well as policy transfer, awareness raising and dissemination of project results at European level. A digital platform to unify and that allows all this work in the context of different countries is missing.

Therefore, on the other hand, the design and development of such a digital platform – entitled: the Let's Care Hub – is part of the Let's Care project and is at the center of this paper. In doing so, we are focusing on the following research questions: **What are the key characteristics of a service system (a Content Management System) that foster student attachment security and how can it be designed?**

Our lens towards this research question is technically and roots in Information System Research. Digital platforms, such as the Let's Care Hub, can support the creation and strengthening of attachment security and relationship