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# Research Support System with Seminar Activity and Weekly Action Reports

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In recent years, it is paid attention that the creativity support tools have a promise to promote the intellectual production by a person, a group and a society. The target of the tools is to make people more creative. However, the creativity support tools do not think whole aspects of the model of human intelligence by J.P.Guilford in 1960's. The tools developed in Japan have supported only divergent thinking or convergent thinking or their combination. In the Guilford's model, the structure of intelligence is represent by three-dimension model that have the combination of "Contents category", "Operations category" and "Products category".

In this study, we propose the research activity support system that has relation to the model and especially focus on the "Operation category" that has five elements such as "Memory", "Cognition", "Divergent thinking", "Convergent thinking", "Evaluation". And the research activity in university is critical for our culture, so the focus domain of the systems is support research activity in university, especially based on the seminar which is periodically held to support a dialogue between a supervisor and his students.

Looking over the research environment today, huge information causes difficulty to search useful information. The research activity support systems should support to detect useful information.

In this study, the research activity support system is designed through consideration of the Guilford's intelligence model and the system especially takes attention to the operation "Evaluation" for justification, which relates to re-usage, of the information

value.

The experiments, which were (1) a making of a research summary with the research data, (2) value evaluation of one personal data by another person and (3) usability tests of the system interfaces, were carried out with the actual usage of the systems for a year and its accumulated research data.

The research showed the necessity of the evaluation process, which has the repetition of evaluation and the evaluation by another person, for improvement of the reliability of the evaluation value. The long-term storage of the evaluation information will lead to the effective selection of the useful research data and will promote more creativity and more idea generation. In the view of the operation “Evaluation”, the results of experiments showed that (1) the research data with more average value was useful to summarized the research, (2) the evaluation value of the contents such as technological information known for a user, investigation data and its consideration were varied by a change of user’s understanding and (3) the knowledge of personal role was acquired by an analyze of the relation between the user’s criteria of research data and the contents of its data.