

ものづくり身体技能の教育における主体とその要求

Embodiment of agents and their requirements in the education of manufacturing physical skills

松浦慶総¹

Yoshifusa Matsuura¹

¹ 横浜国立大学

¹Yokohama National University

Abstract: In the physical skill education of manufacturing, I will examine the issues of research that the author has conducted so far. The subject of my research was the education of shielded metal arc welding techniques, and I initially studied it as the "Expert-Novice Difference problem". Novice data were compared based on Expert's evaluation of physical movements and deliverables. However, the expert data used as the standard was highly individual-dependent, the process for selecting evaluation items was unclear, and educational feedback on evaluation was difficult.

Therefore, I proposed a skill information structuring method focusing on physical skill education [1]. With this proposed method, it became possible to visualize information related to skill education, and it was possible to introduce somatosensory information, which was difficult to handle in the past. Based on this structured skill information, we proposed an awareness promotion model and tried to support skill education by introducing this model [2]. However, the result was that the learner was "unaware". Inferring this cause, the following points can be considered. (1) Since the priority of skill information is not determined according to the learner's proficiency level, the learner regards this as comprehensive information. (2) It is important for learners and professors to determine the necessary skill information according to their respective skill learning goals. However, in the conventional education support system, the goal is not clear and is not specified. (3) Since the goals of skill education are not clear, the motivation of learners has not been sufficiently maintained and improved.

Therefore, I first propose a "target skill purpose map" to clarify the goals of learners and instructors (employers). This map is composed of three axes, "industrial-artistic", "professional-hobby", and "proficiency", and clarifies the goals of the skills to be educated. It is expected that this will improve the motivation in education by each embodiment of agents selecting what the purpose is in manufacturing education and the evaluation items and criteria for that purpose, and as a result, it will be possible to activate "awareness".

参考文献

- [1] 松浦 慶総, 高田 一: 溶接技能教育における情報構造化手法の提案 2015 年度人工知能学会全国大会論文集 (人工知能学会), (2015)
- [2] 第1 著者, 第2 著者, 第3 著者: 技能情報共有における「気づき」と「語り」を促進する手法に関する研究, 公開研究会・講演会技術と社会の関連を巡って: 技術史から経営戦略まで: 講演論文集 (一般社団法人 日本機械学会), 2018 (0), (2018)