EDUCATION ADAPTING TO THE FUTURE: MEETING THE SKILL NEEDS IN MANUFACTURING SECTOR

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Background

Tampere University of Applied Sciences (TAMK) and SASKY education association launched the **"Manufacturing Academy 2.0" project**, co-funded by the European Social Fund Plus (ESF+) in late 2023. The project aims to support the manufacturing sector in Finland's Pirkanmaa region by creating a pedagogical model that aligns with industry needs and modernizes training method and by identifying, collecting, and transferring tacit knowledge.

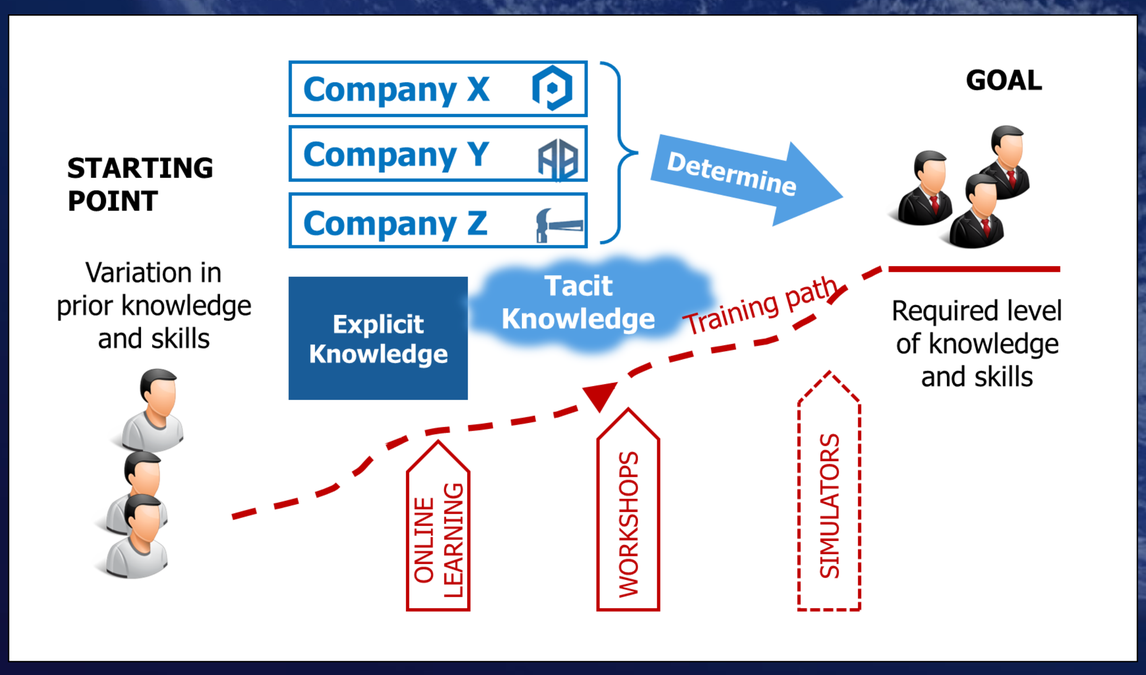

Fig. 1. The basic elements of "Manufacturing Academy 2.0" education concept.

Surveying Companies' Needs Through Structured Interviews

Structured interviews with manufacturing companies (N=78) focused on identifying near-future skill needs and existing models for transferring tacit knowledge. The survey also assessed the urgency of addressing tacit knowledge loss and companies' readiness to participate in developing training programs in collaboration with TAMK. Additionally, it explored specific areas of workforce needs and preferences for training delivery methods to ensure the educational concept meets industry demands.

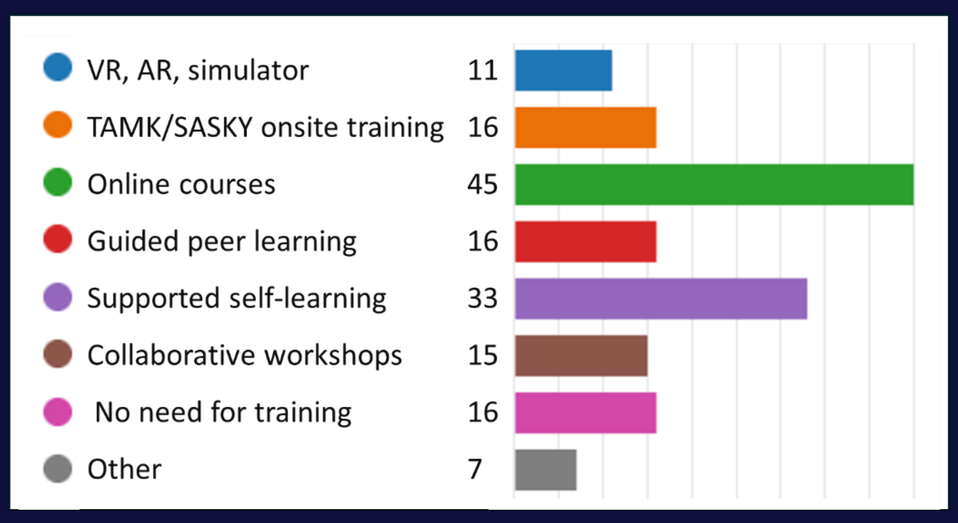

Fig. 2. The preferred training methods in the companies.

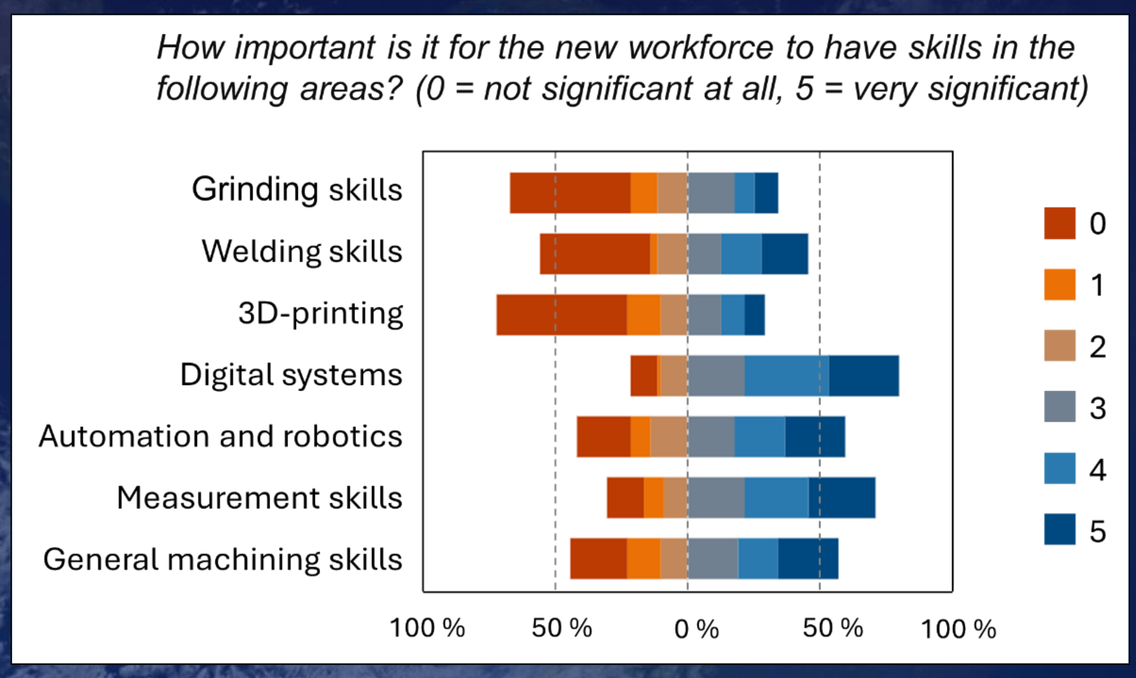

Fig. 3. The answer distribution of the importance of different skills that the new workforce should have. Similar results were obtained also for in-company training needs.

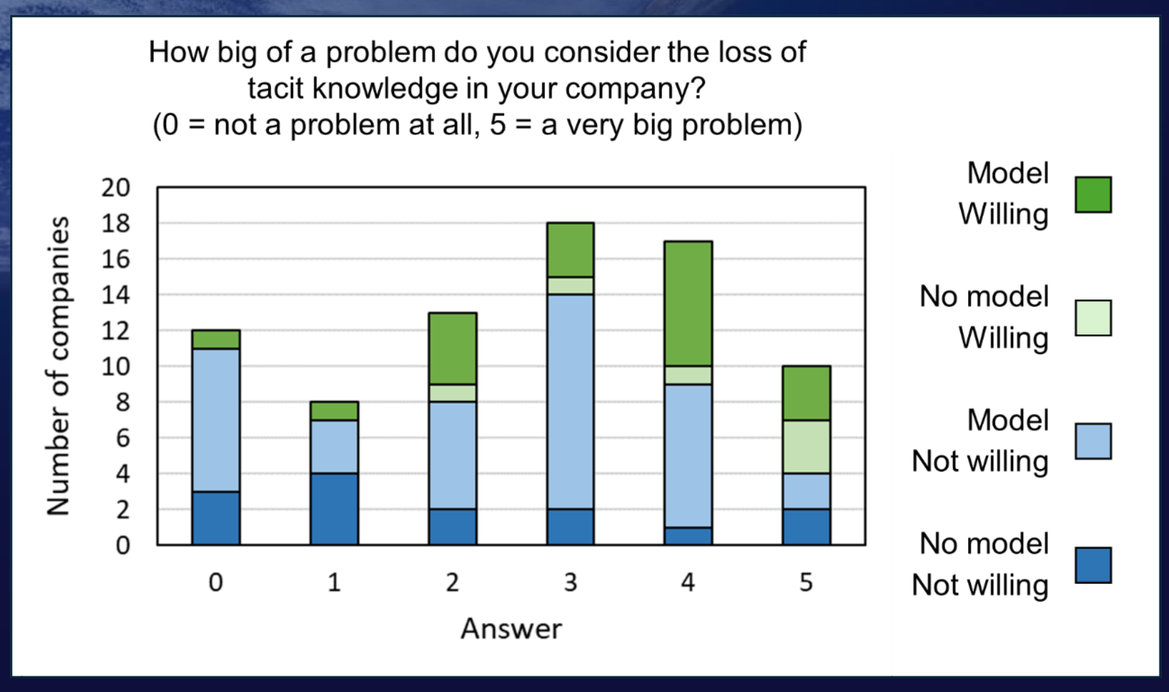

Fig. 4. The answer distribution to the question of the importance of tacit knowledge loss in the company. The companies were asked if they had a model for transferring tacit knowledge and if they were willing to co-develop it with TAMK.

Survey results highlight the importance of retaining valuable tacit knowledge within the industry. The findings indicate varying needs for skills and training across different areas. Self-directed and flexible study methods, such as online learning and guided self-study, seem to best suit the industry's needs. However, there's hesitation in adopting new technologies like VR and AR. More dialogue and cooperation between educational institutions and the industry are needed. As the manufacturing sector progresses, these insights will inform the development of training models and contents that aim to meet both current and future skill needs.

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