



D3.1 Definition of the scientific background of “learning by creating” methodology and its evaluation tools

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Table of Contents

Document Information	2
Document History.....	2
Funding information and disclaimer.....	2
Table of Contents	3
1. Introduction.....	5
2. Pedagogical Principles of Learning by Creating	6
2.1. Conception of Human Nature.....	6
2.2. Conception of Knowledge.....	7
2.3. Conception of Learning.....	8
3. Learning Theories Underlying Learning by Creating Method.....	10
3.1. Experiential Learning	10
3.2. Team Learning	10
3.3. Learning via dialogue.....	11
3.4. Self-directed Learning.....	11
4. Critical Points of the Learning by Creating Method	13
4.1. Learner Owns and Leads Their Learning	13
4.2. The Team Provides a Home for Effective Learning.....	13
4.3. Projects Are Tools for Solving Customer Problems	14
4.4. Courage to Experiment and Fail Emerges	14
4.5. The Coach Guides the Learning Process.....	14
4.6. Adequate Time Allows the Learning Process	15
5. Evaluation Tools.....	16
5.1. Learner Self-Assessment - Learning Contract.....	16
5.2. Team Learning and Operation Evaluation - TPI Framework.....	17
5.3. Project Success Evaluation - Motorola Model.....	18
5.4. Customer Feedback Tool - Customer Panel	18
5.5. Coach Evaluation Tool - Individual Discussions	19
5.6. Community Assessment Tool - Reward Culture	19
6. Case Tiimiakatemia by JAMK	21
6.1. From History to Present	21
Leading Thoughts.....	21
Leadership Model	23
6.2. Background Theories of Learning Methods.....	23
Self-directed Learning - Individual as a Learner	23
Learning Organization - Community as a Learner	24
Knowledge Creation - Individuals and Teams as Creators and Applicators of Knowledge	25
6.3. Essential at Tiimiakatemia's Learning Model	25
Team, Team Company, Team Learning	25
Coach, Coaching Process	26
Learning Ecosystem within the Tiimiakatemia	26
Teampreneur's Weekly Model	27

Ten Guidelines for Teampreneurs	27
6.4. Results of Tiimiakatemia.....	27
Entrepreneurship and Employment	27
Competence and Networks	28
Awards Received by Tiimiakatemia	29
7. Sources	30

1. Introduction

This guide is written as a part of the international TEAMIT+ project. The central objective of the project is to develop an innovative training program that applies the learning by creating learning method. The aim of the training program content is to increase participants' skills to influence via collaboration towards greener and sustainable economic growth. Participants in the program are students aged 16-30 from vocational institutions or higher education as well as young immigrants, and unemployed individuals.

The purpose of this guide is to describe the pedagogical and conceptual background of the innovative training program and its key assessment tools. The description is made in a practical manner so that the reader of the guide gets ideas and suggestions for developing their own teaching, team, or organizational learning. Learning by creation is a learning method that generates and strengthens the competencies needed in both work and life. The pedagogy used in the TEAMIT+ training program is based on over 30 years of experience in Tiimiakatemia by JAMK's radical team entrepreneurship pedagogy. An introduction to Tiimiakatemia is provided at the end of this guide.

Jamk University of Applied Sciences (Finnish: Jyväskylän ammattikorkeakoulu) is a university of applied sciences (a polytechnic) in Finland, in the region of Central Finland. Jamk offers a wide variety of degree programmes in both Finnish and English as well as opportunities for open studies that students can complete either online or on campus, depending on the course. Working life-oriented research, development and innovation (RDI) work is one of the basic tasks of Jamk as a University of Applied Sciences. Tiimiakatemia is part of JAMK.

The authors of this guide, Mrs Tapu Holttinen, Mrs Anu Manner, and Mr, Janne Roiha, work as team coaches at Tiimiakatemia and they are developers of the Tiimiakatemia learning community. The authors possess strong theoretical knowledge of pedagogical methods that promote team entrepreneurship, employment, and the competencies required in the Finnish job market. They also have practical experience in coaching team entrepreneurs in the field of experiential learning and team learning.

2. Pedagogical Principles of Learning by Creating

Learning by creating relies on a strong pedagogical value and principle framework. To successfully implement the method in practice, teachers must first delve into their own conceptions of human nature, knowledge, and learning. Identifying these is crucial because they directly influence the teaching styles and methods used, as well as interaction with learners. They shape the teacher's understanding of the best learning situations and environments, the type of feedback or assessment that supports learner development, and the extent to which learners are active and responsible in the learning process. Conceptions of human nature, knowledge, and learning also strongly influence how the teacher constructs their own role and tasks in learning situations.

2.1. Conception of Human Nature

Conception of human nature refers to the views and beliefs a teacher holds about human beings, learners, and learning. It forms the basis for the teacher's pedagogical decisions, teaching strategies, and interaction with learners. Conceptions of human nature can vary among teachers and may be influenced by educational theories, philosophy, cultural perspectives, or personal values.

A teacher's conception of human nature may relate to how they perceive learners' abilities, motivation, learning styles, and needs. It may also include views on how teachers approach students' mistakes, encourage their development, and promote their self-esteem. Conceptions of human nature influence teachers' teaching strategies, assessment practices, and overall approach to teaching.

The conception of human nature in the learning by creating method is closely aligned with a humanistic view of human nature. A humanistic conception of human nature is based on the philosophical movement of humanism and emphasizes individual freedom, dignity, and potential. This conception highlights human experience, dignity, and the individual's ability to self-develop.

The humanistic conception of human nature has the following characteristics:

Value and freedom of the individual: The humanistic conception emphasizes the uniqueness and value of everyone. Every person is seen to have internal potential and the ability to grow, learn, and develop.

Self-awareness and self-realization: The humanistic view encourages individuals to strive for self-awareness and the realization of their own abilities. Individuals should have the opportunity to discover and pursue their passions and goals.

Holistic view of the individual: The humanistic conception of human nature considers individuals holistically, considering physical, emotional, social, and spiritual aspects. The individual is seen as a complex entity.

Empathy and interpersonal interaction: This conception also emphasizes empathy and understanding between people. Interaction and mutual support are key elements that promote individual growth and well-being.

Role of education: The humanistic view influences educational concepts, encouraging teachers to support students in their personal development, not just in transmitting knowledge. Learning is seen as a process in which individuals discover insights and build their own understanding of the world.

As a teacher, do you recognize what your conception of human nature is? How does your conception of human nature affect your teaching strategies and the implementation of your teaching?

2.2. Conception of Knowledge

Conception of knowledge refers to how an individual or community understands knowledge and knowing. It reflects views on what knowledge is, how it is generated and organized, and how one should approach it. Conception of knowledge guides thinking about knowledge and influences how people acquire, process, and use knowledge in various situations.

A teacher's conception of knowledge refers to how the teacher sees knowledge being constructed and transferred to students and how they design learning environments. A teacher's conception of knowledge influences how they support students' learning. For example, if a teacher believes that learning is an active process, they may provide more opportunities for learners to engage in learning and apply what they have learned in practice. A teacher's conception of knowledge can also influence how they motivate learners and encourage them to learn new things.

A teacher's conception of knowledge shapes their pedagogical decisions and helps create effective, learning-supportive teaching environments. This view guides the teacher's actions and efforts to create meaningful learning experiences for their students. Conception of knowledge

can guide assessment criteria and assessment methods, such as project work, portfolio methods, or more traditional exams.

The conceptions of knowledge that characterize the learning by creating method are well described by the following:

Constructivist conception of knowledge: Constructivism emphasizes the active role of learners in constructing knowledge from their own experiences and previous knowledge. Teaching aims to support learners' own construction and understanding.

Social conception of knowledge: This view relates to learning occurring in a social context and interaction with others. Teaching emphasizes teamwork, discussion, dialogue, and collaborative thinking and cooperation.

Contextual conception of knowledge: This view emphasizes the contextual nature of knowledge and the idea that knowledge should always be taught and learned in connection with a specific situation or problem.

Critical conception of knowledge: Critical conception of knowledge is related to the ability to critically evaluate information, identify the reliability of sources, and question assumptions. Teaching focuses on critical thinking and evaluation of knowledge.

As a teacher, do you recognize what your conception of knowledge is? How does your conception of knowledge affect your teaching strategies and the implementation of your teaching?

2.3. Conception of Learning

Conception of learning refers to views and beliefs about how people learn and how learning should be understood. It is the teacher's understanding of how knowledge acquisition and knowledge construction occur, as well as the roles assigned to learners and teachers in the learning process. Conception of learning shapes the teacher's pedagogical decisions, teaching methods, and interaction with students. The teacher's view of learning also influences how they create an open, supportive, and inspiring environment for learners.

The teacher's conception of learning guides how they perceive learning to occur. It influences the teaching methods the teacher uses in learning situations, such as problem-based learning, teamwork, discussions, and project work. The teacher's conception of learning is also evident in the teaching strategies they choose. If a teacher believes that learning occurs best through participation, they are likely to use more interactive teaching methods. The teacher's conception

of learning also affects how they motivate students. If a teacher believes that students can be active actor in their own learning, they strive to create environments that encourage motivation and participation.

Conceptions of learning that characterize the learning by creating method include the following:

Cognitive conception of learning: Cognitive views emphasize internal mental processes such as information processing, memory, and thinking. Learning is seen as an active process of knowledge construction, where learners process and organize information.

Constructivist conception of learning: Emphasizes the learner's active role as a knowledge builder based on their experiences and previous knowledge. Learning is seen as a process where the learner creates meanings from the surrounding information.

Social constructivism: Expands the constructivist view to include the social dimension. Learning is seen as occurring through interaction with others and by acting as a member of the community.

Experiential conception of learning: Emphasizes the role of experience in learning. The learner's own experience, experimentation, and action are key components of learning.

Situated conception of learning: This view emphasizes that learning is tied to action in a specific situation or context. Knowledge gains its meaning and relevance through the context.

Critical conception of learning: States that learning is more than just transferring knowledge. Critical conception of learning emphasizes the development of thinking, questioning of knowledge, and supporting social change.

Affective conception of learning: This view focuses on the learner's emotions and values. Learning is associated with emotional experiences, motivation, and the formation of values.

Phenomenon-based conception of learning: Focuses on learning based on phenomena or topics. Learning occurs through solving practical problems and delving into phenomena.

As a teacher, do you recognize what your conception of learning is? How does your conception of learning affect your teaching strategies and the implementation of your teaching?

3. Learning Theories Underlying Learning by Creating Method

Learning by creating is a learning method that combines several well-known learning theories. Learning theories refer to concepts, models, and theories that aim to explain how learning occurs, what influences learning, how knowledge is stored and processed, and how learning can be promoted and enhanced. To understand what kind of learning method learning by creating is, will need to explore the key theories that influence it.

3.1. Experiential Learning

Experiential learning is a learning method that emphasizes the learner's active participation, practical experiences, and practical actions in the learning process. This method is based on the idea that learning occurs most effectively when learners are actively involved in acquiring and applying knowledge and skills. Learning occurs through concrete experiences (Kolb, 1984), such as projects, client work, internships, or apprenticeships. In experiential learning, learners encounter authentic and real-life problems that they must solve. After practical experiences, learners review their experiences and reflect on what they have learned. Experiential learning is most effective when learners are part of a group or team. In experiential learning, learners experience ownership and commitment to their own learning process. The method promotes the development of practical skills and deep understanding because it connects theory to practice and allows learners to apply their knowledge in real situations.

In the learning by creating method, the most important aspect is that the activities stem from the learners and their learning needs. Learners engage in projects where they can learn new knowledge and skills. Learners also construct projects themselves, which relate to their interests and reinforce the development of their competencies. It is essential that the teacher does not acquire or create projects but supports the emergence of project ideas and encourages each learner to find their own projects.

3.2. Team Learning

Team learning is a pedagogical model that focuses on learning within a group. It emphasizes collaborative knowledge building, where group members actively participate in the learning process together. In this pedagogical model, learning occurs through interaction with other group members, and knowledge is shared and constructed together. Peter Senge (1999) defines team learning as follows: *"Team learning is the process of committed people, who learn from each other, and are able to perform new actions, enabling them to constantly improve their performance."* Team learning requires time to develop into a team because the most effective

learning occurs when there is trust and psychological safety within the team. What makes team learning effective is also that everyone can act as a teacher to each other, and everyone can learn from one another. Common learning goals and reflection deepen the acquired knowledge and skills. Common performance challenges shape and strengthen the team and team learning.

In the learning by creating method, it is essential that the team has sufficient time to develop into a team and that the team is coached according to the principles of team coaching. The team learns to identify and address its own dysfunctions. The team sets its own learning goals, methods, and metrics. Various team roles, the strengths, and competencies of its members are utilized within the team. Investment in team interaction and togetherness is also made outside of formal learning times.

3.3. Learning via dialogue

Dialogue refers to an open and profound conversation where parties seek to understand each other's perspectives, share their thoughts, and build a common understanding. Dialogue differs from regular conversation in that its aim is mutual learning and achieving deeper understanding, rather than winning one's own perspective or convincing the other party. Dialogue is based on openness, listening, respect, and readiness to examine issues from different perspectives. It is also essential to have the ability to empathize with the other party and see the world through their eyes. Dialogue can occur both between individuals and within teams. Key features of dialogue include listening without preconceptions or ready-made answers, openness to one's own and others' thoughts and feelings, building shared understanding and synergy, reflection on thoughts and discussions, and learning from one's own interaction.

In the learning by creating method, the most crucial aspect is that learning occurs through dialogue. Learning dialogue skills begins from the first team meetings and continues throughout the team process. William Isaac's (1999) basic rules of dialogue - listen, respect, suspend judgment, and speak from the heart - help to understand the conditions of dialogue. Dialogue is regularly evaluated. In dialogue, the aim is for each team member to be heard and understood, and for the collective dialogue to generate and deepen shared understanding. Dialogue can take place face-to-face or online. In online dialogue, effective remote meeting practices are emphasized (e.g. good internet connection, functional camera and microphone, quiet environment, good lighting, proficiency in the remote meeting application being used).

3.4. Self-directed Learning

Ian Cunningham (1999) defines self-directed learning as follows: *"Self-directed learning is the ability to learn things independently and consciously. It requires the skill to plan and manage one's own learning, seek necessary resources, and take responsibility for one's learning process."*

A self-directed learner recognizes their strengths and areas for development, sets goals for themselves, and regularly evaluates their own learning." A self-directed learner is motivated to learn, and they are committed to their learning goals. They have internal motivation that guides them forward. A self-directed learner can make independent decisions, such as selecting learning materials, planning schedules, and assessing their own progress. They actively seek information from various sources, such as books, websites, courses, and other learning environments. A self-directed learner can solve problems independently and apply their learning in various situations. They can evaluate their own learning, identify their strengths and areas for improvement, and make necessary changes to their learning strategies. A self-directed learner understands that learning is a continuous process, and they are open to new ideas and perspectives.

In the learning by creating method, the most crucial aspect is for the learner to understand that they are learning for themselves and their own future. Therefore, the learner must be active in determining what kind of skills, knowledge, and abilities they need. The goal is for the learner to gradually become the owner and leader of their own learning during the learning process. In this case, learning is guided by goals, methods, and metrics set by the learner themselves. Throughout the process, they learn to reflect on and evaluate their own skills.

4. Critical Points of the Learning by Creating Method

The implementation of the learning by creating method entails certain constraints. These are conditions without which the method cannot be successfully executed, nor can the desired results be achieved. Critical points in the adoption of the method are also the ones that challenge both the teacher and the learner the most. This is because they require simultaneously unlearning old practices and learning new ones. They may also necessitate updating teachers' beliefs, knowledge, and learning paradigms, restructuring learning environments, and transforming the traditional role of the teacher into that of a coach.

If the learning by creating method is new in everyday life, persistence in its implementation is essential. The new method presents both successes and failures, joy and frustration. It is important to remember that successful implementation of the method takes time, and results come with delay. Often, the method needs to be adapted to fit one's own operating environment, which means various bold experiments and learning through mistakes.

4.1. Learner Owns and Leads Their Learning

In the learning by creating method, the learner must become the owner and leader of their own learning. This means that they learn for themselves and their future. The teacher is not the one organizing learning situations or offering pre-designed courses filled with learning objectives. The learner must recognize their own skills and desires for development. They take responsibility for their learning and results. The learner sets their own learning goals and the means to achieve them. At some point, competence is no longer measured by a test created by the teacher but by the learner's self-reflection. Individual coaching and systematically used self-directed learning tools support the learner's self-direction.

4.2. The Team Provides a Home for Effective Learning

According to an African proverb: *"If you want to go quickly, go alone. If you want to go far, go together."* The learning by creating method believes that learning together is effective and enjoyable. To succeed in learning together, a team is needed. A learning team is more than a group or class. The team has common learning and performance goals. They feel collective responsibility for achieving the team's goals and performances. Interaction and cooperation are intense, and their development is invested in during the team's lifecycle. The team combines different passions, ideas, and skills. A genuine team is a safe place for bold experimentation and self-transcendence. Building a team requires team coaching and a learning process long enough.

4.3. Projects Are Tools for Solving Customer Problems

Real customer projects effectively apply learned theory into practice. Therefore, in the learning by creating method, projects are a central learning tool. Projects are either ready-made assignments from a customer or self-initiated by learners; the teacher does not create or design them. Projects have a clear lifecycle, are managed, involve a suitable team as executors, and are related to money. Projects are carefully planned, and their lessons are discussed at various stages of the project. The customer is actively involved in the project, contributing their perspective to learning. Projects challenge learners to work together, create functional solutions, and manage customer relationships. Learning from projects requires project coaching and projects that are learner- and work-life-oriented.

4.4. Courage to Experiment and Fail Emerges

The learning by doing method challenges both the learner and the teacher to bold experimentation. Several workplace challenges cannot be solved with the same old methods; new ones are needed. New thinking, new ideas, new actions, new cooperation are necessary. The effectiveness of a new solution cannot be fully known in advance, so risks must be taken. Creativity is also required because solutions often require new creations. Courage to experiment and creativity thrive best in a team. Making mistakes should not be feared; they should be seen as learning experiences. Lessons from mistakes are shared to avoid repeating them foolishly. Courage to experiment and fail requires a psychologically safe environment, the ability to tolerate uncertainty, and competence to eliminate unnecessary risks.

4.5. The Coach Guides the Learning Process

The learning by creating method strongly influences how the teacher guides the learning process and team learning. Instead of the term teacher, the term coach is preferred because it evokes new thoughts about the execution of work. The coach's main task is to facilitate individual and team learning, create space for dialogue, and coach authentic action. The coach does not provide ready-made answers or projects; they encourage curiosity and experimentation. The coach's task is to guide everyone to lead themselves and take responsibility for their own learning. The coach helps the learner see their own strengths and areas for development; thus, feedback is an important tool in building the learner's self-esteem and competence. To succeed in their work, the coach needs the ability to tolerate chaos, trust the process, and coaching skills. It's best if the coach has their own coaching team to spar their own expertise and role.

4.6. Adequate Time Allows the Learning Process

The learning by creating method is successful when sufficient time is allocated for learning. Adequate time allows for a process-oriented approach, and for the learner to become the owner of their own learning, engage in authentic action, and engage in team learning in the first place. Leading one's own learning requires time to get to know oneself as a learner, team member, and doer. Teams are built through shared dialogue and experiences. Building trust takes time and cannot be rushed with magic tricks. Experiences of success in action strengthen self-confidence and give courage to make larger experiments. Building the relationship between the coach and the learner also takes time. Genuine feedback supporting learning and growth arises only through acquaintance and trust. The development of thinking, learning, and practical application of knowledge and skills requires a sufficiently long learning process.

5. Evaluation Tools

Evaluation tools that can be used to assess individual competence growth, the depth of teamwork and learning, as well as the quality and success of projects related to the learning by creating method are described next. These selected evaluation tools do not directly provide information about the development of individual knowledge or skills; rather, they focus more comprehensively on assessing the learner's acquired knowledge, skills, competence, and networks. The depth of use of an evaluation tool depends on the individual's self-assessment and reflection skills. In addition to individual, team, and project evaluation tools, client, coach, and community evaluation tools are also introduced. In these, it is essential for the learner to actively seek and receive feedback and to develop their own actions through the feedback received.

5.1. Learner Self-Assessment - Learning Contract

The Learning Contract is a tested and proven tool for self-management. The tool was developed by British researcher Ian Cunningham. He wrote in his book "The Wisdom of Strategic Learning" in 1994 about the importance of self-directedness in the development of organizations and individuals. The Learning Contract is a tool that focuses on guiding personal learning. Its purpose is to create a structured way for individuals to set their own learning goals, plan for their achievement, and assess their progress. This approach emphasizes self-directed learning and taking personal responsibility for development.

The questions in the Learning Contract are:

Where have I been?

Where am I now?

Where do I want to go?

How do I get there?

How will I know when I have arrived?

When creating the Learning Contract, the learner and coach discuss together to determine learning goals that are in line with both personal and organizational objectives. However, it is important to remember that the Learning Contract is a contract made in writing by the individual with themselves. The process involves setting goals and creating an action plan. The coach's role is to support goal achievement by providing adequate resources to support learning. Regular feedback and evaluation are the responsibility not only of the individual but also of the learning team and coaches.

Developing learner self-directedness is important for organizations. The Learning Contract aims to strengthen learner motivation, commitment, and professional development, while also providing organizations with a means to support and guide individual learning and growth. In this way, an organization's competitive advantage becomes learning and flexibility. Through the Learning Contract, individuals can take an active role in their own learning. Stopping to reflect on one's own competence every six months increases ownership of learning and the ability to plan and evaluate one's own competence.

Strong self-directedness does not mean that individuals should not question their own thoughts. Therefore, it is always good to go through the Learning Contract thoroughly with one's coach and peers. Everyone has blind spots, things that require the help of others to identify. Speaking out loud about the content of the Learning Contract, especially the goals and the actions leading to them, makes them tangible. It also helps the team and the organization understand the individual better. Individual goals become shared, and the organization begins to move in the same direction.

5.2. Team Learning and Operation Evaluation - TPI Framework

Jyväskylä University of Applied Sciences' Tiimiakatemia (2022) has developed the Team Performance Indicator (TPI) framework to assess team learning, development, and quality. The framework evaluates the team through learning, team enterprise development, bold experimentation, customer thinking, network development, accumulation of team knowledge capital, and responsibility thinking. The team evaluates its own learning and development twice a year by engaging in dialogue based on the statements in the framework. When the team agrees with the truthfulness of a statement, it earns a point. The framework enhances the team's evaluation and reflection capabilities and provides a comprehensive picture of the team's current situation and areas for improvement.

In the team learning process, aspects such as setting team rules and learning goals are assessed. The team must be familiar with the basic rules of dialogue and complete at least one joint project. Belbin's (2010) different team roles are familiar and used in assembling and leading teams. Team entrepreneurs reflect on the team's actions semi-annually. Theoretical knowledge is acquired concerning team development and operations. Team learning actively takes place during the team's weekly training sessions. In the team enterprise learning process, the existence of the team enterprise's leading thoughts, strategy, budget, and action plan are evaluated. The team enterprise's development and learning are measured using predefined metrics, utilizing perspectives from Kaplan and Norton's (1996) balanced scorecard. Each team entrepreneur's actions as a responsible and active actor are assessed. The team enterprise's management team must be willing, active, and functional. The team enterprise's communication, decision-

making processes, and leadership style are regularly evaluated. It is also assessed whether the team enterprise conducts profitable operations responsibly.

5.3. Project Success Evaluation - Motorola Model

One of the key processes in a learning organization is systematic self-assessment by individuals, teams, and the community. All activities of individuals and teams, such as customer visits, events, and projects, should be evaluated and reflected upon. Project success can be assessed by comparing outcomes with the project plan created at the beginning. A useful project planning tool is, for example, the Business Model Canvas and its sustainability version created by Alexander Osterwalder and Yves Pigneur (2010). An excellent tool for reflecting on project lessons is the Motorola model.

This is a very simple reporting model used to analyze and reflect on project implementation and outcomes. The tool is mentioned in Robert Waterman's (1999) book "What America Does Right." The name Motorola comes from the American telecommunications company Motorola, which used this reporting model.

Motorola consists of four simple questions:

What went well?

What went wrong?

What did I learn?

What will I apply in practice?

The idea behind Motorola is to succinctly document the lessons learned from the project. Motorola reflection can be done individually or with the project team. Team members may perceive what went well or wrong differently. Collaborative reflection expands understanding of successful or unsuccessful aspects. The most important question in Motorola is question number four, what will I apply in practice. It indicates which lessons and ideas will be applied in the next project. The more ideas applied in practice, the more lessons the project has provided to its participants. And the more likely the next project is to succeed better than its predecessor.

5.4. Customer Feedback Tool - Customer Panel

Feargall Quinn, an Irish entrepreneur and politician, created the customer panel tool. The purpose of this tool was to gather customer feedback and use it to improve the customer experience. The tool is based on the idea that businesses can learn from their customers and that they should be more actively involved in the development of the company's operations. The tool was introduced in the book "Crowning the Customer" in 1990. The customer panel is a simple tool.

The company invites a selected group of customers (e.g., users of a specific product or service) to come together to discuss their experiences and opinions. During the meeting, customers have a voice to provide feedback and share their experiences and improvement ideas. The role of the company representative is to convene the meeting, listen, and, if necessary, respond to the raised questions. An external expert may facilitate the customer panel. The ideas generated in the customer panel are compiled into a memo, which the company can use to implement ideas and feedback received for the development of selected products or services. The topics of discussion in the customer panel may also include the company's brand, employer image, or executed collaboration projects. The goal of the customer panel is to emphasize customer orientation and to create an interactive forum where the company listens directly to customers' opinions and responds to their feedback.

5.5. Coach Evaluation Tool - Individual Discussions

Individual discussions are a tool to familiarize, guide, and assess an individual's skills. Conducted regularly, they provide an opportunity to monitor the learner's skill development. The first development discussion serves more as a tool for getting acquainted, familiarizing, and building trust. Subsequent discussions focus more on skill assessment and further development, such as challenging theoretical knowledge and the quality of performance. In individual discussions, the learner pauses to evaluate their own actions and skills, set future learning goals, and determine ways to achieve them. They are a place where the learner also receives feedback from the coach regarding their skills.

The skills assessed in individual discussions are comprehensive. They encompass attitudes, professional skills, social skills, ethics, and responsibility, including leadership as a team player, project worker, self-leader, and leader of others. Individual discussions are also a place for the learner to provide feedback to the coach. They create opportunities for open communication, performance evaluation, and promotion of collaboration within the organization.

5.6. Community Assessment Tool - Reward Culture

Rewarding is one way to evaluate the development of individuals and teams. Rewarding can be done top-down or among peers. It can be spontaneous or regular. It is important that the criteria for rewarding are clear and that the associated assessment is transparent. It is well-researched that receiving a reward strengthens one's self-esteem and confidence in their abilities. As a result of rewarding, an increase in motivation, enhanced commitment, stronger desire to achieve set goals, and reinforcement of a positive atmosphere have been observed.

One way for a community to evaluate successes is by creating a unique reward culture. At Tiimiakatemia by JAMK, awards are distributed in spring and autumn. First, teams can nominate

candidates for various categories. Teams justify in writing to the entire community why their nominated candidate is a suitable recipient for the award. Then, each member of the community gets to vote for their favorite among all the nominees. The Coach's Special Award is the only award whose distribution is decided by the coaching team. The awards are presented in solemn ceremonies in spring and autumn.

Example of awards distributed at Team Academy:

- Feargal Quinn Award: Award for kindness and fun
- Anita Roddick Award: Disruptive thinker and innovator in marketing
- Tom Peters Award: Innovative motivator and bold experimenter
- Greta Thunberg Award: Award for sustainability and ecological awareness
- Golden Step Award: Most improved team company of the year
- Golden Egg Award: Most magnificent mistake of the year, from which lessons have been learned.

6. Case Tiimiakatemia by JAMK

Jyväskylä University of Applied Sciences Tiimiakatemia is a pioneering institution in team entrepreneurship, lifelong learning, and the production of skills required in the working life. Tiimiakatemia's learning theory is a practical example of applying the learning by creating method into practice. Tiimiakatemia, its learning theories, and achieved results are briefly introduced next. If you want to get to know Tiimiakatemia better, welcome to a learning visit to Jyväskylä. You can also get acquainted with Tiimiakatemia through the website or social media.

6.1. From History to Present

Tiimiakatemia is the top unit of team entrepreneurship at Jyväskylä University of Applied Sciences. The background of Tiimiakatemia inception lies in the introduction of the university of applied sciences into the Finnish education system. According to the founder of Tiimiakatemia, Johannes Partanen, nothing changed in education, so he posted a notice on the school's bulletin board asking, *"Do you want to go on a round-the-world trip and learn a bit of marketing on the side?"*. This happened in 1993, and the first team, Round the World, was formed with 24 enthusiastic learners. Since then, one to four learning teams have been formed annually, creating a strong alumni network for Tiimiakatemia.

Studies at Tiimiakatemia last for 3.5 years, and upon graduation, students receive a Bachelor of Business Administration degree. The extent of the degree is 210 ECTS, and it qualifies for further studies in higher education's master's programs. The curriculum consists of the following study modules: transferable skills, languages, and communication, JAMK future factory, basics of business competence, advanced studies in team entrepreneur, specialization as team entrepreneur, research and development activities and thesis, practical training, and elective studies. Learning at Tiimiakatemia happens learning by doing in a team company and applying the latest theory into practice.

In 2024, Tiimiakatemia employs six team coaches and has 130 teampreneurs. The team entrepreneurs form nine cooperatives or learning teams. The combined turnover of the cooperatives in 2023 was approximately one million euros.

Leading Thoughts

Tiimiakatemia is led strongly through shared leading thoughts. Jim Collins and Jerry Porras (1994) consider leading thoughts important because they are a fundamental part of the DNA of successful and sustainable companies. Their research is based on the understanding that successful companies have a profound and clear understanding of what makes them unique and what they strive to achieve in the long term. Collins and Porras emphasize that successful

companies not only pursue short-term profits or follow trends but also build a strong foundation that stands the test of time. This is based on a deep understanding of the company's values, vision, and mission.

Vision: Let's create team driven f*** business that matters

Mission: We create bold teampreneurs.

Values:

- Relationships
- Sustainable teampreneurship
- Bold experiments
- Knowledge creation
- Learning by doing
- Travelling

Principles complementing values

Individual responsibility

Everything always starts with the individual. A teampreneur must earn their membership in the team company every day through their actions. Freedom brings responsibility, and therefore, we don't blame others but only ourselves.

Action

We learn and achieve results in our team company in collaboration with customers. Our operations are fun, productive, and visible.

Learning

New insights come from dialogue, action, and theories.

Flow of knowledge

Every teampreneur must understand the entirety of our operations, create new knowledge, and spread it beyond team boundaries.

Legacy

We cherish our culture and leave a legacy for future team companies.

Leadership Model

Tiimiakatemia's leadership model is flat and shared. Team coaches lead Tiimiakatemia together with annually elected cooperative's team leaders. In addition, Tiimiakatemia selects teampreneur managers annually for the following positions: community, internationalization, alumni activities, marketing, and recruitment. Coaches, team leaders, and managers meet twice a year for strategy days to plan goals and actions for the upcoming season. In addition, team leaders and managers meet every other week to discuss more everyday leadership issues.

Tiimiakatemia is led through open communication and shared events. The event calendar includes several events annually that bring together learning from each other and develop one's own, team's, team companies, and the entire community's activities. Teampreneurs act as organizers of events.

Peer Leadership Principles

- Know your team members. Lead emotions and create safety.
- Listen. Be genuinely present.
- Create a common goal with your team & navigate through successes towards it.
- Ignite internal motivation by reinforcing the feeling of meaningfulness.
- Lead yourself so you can lead others.
- Lead team members' potential through strengths.
- Quality communication is the foundation of good leadership.
- Claim your place by leading by example.
- Promote solution orientation.
- Create good team spirit and grow capital with positive thinking.

6.2. Background Theories of Learning Methods

Three different learning theories have influenced the background of Tiimiakatemia's learning method. These are Ian Cunningham's theory of self-directed learning, Peter Senge's theory of the learning organization, and Ikujiro Nonaka and Hirotaka Takeuchi's theory of knowledge creation. These three learning theories will briefly be described next.

Self-directed Learning - Individual as a Learner

Ian Cunningham defines learning as best achieved when the learner is actively involved in the learning process. In this case, the learner is not merely a passive recipient of pre-digested information but also a constructor and applier of knowledge. Cunningham's theory believes that learners can take responsibility for their own learning. Learner autonomy, in this context, refers

to the ability to set learning goals, choose learning strategies, and reflect on one's own competence. Cunningham emphasizes learning through practical experiences - learning is most effective by doing and experiencing things. Experiments shape meaningful and profound learning experiences. Cunningham's theory also highlights the importance of social interaction in learning. The best learning occurs through shared experiences with others. In the theory of self-directed learning, learning is seen as continuous and lifelong. The learner learns and develops throughout their life.

Learning at Tiimiakatemia begins with the learner owning their own learning and leading it. A sufficiently long learning process, along with team and coach guidance and support, helps the learner to grow into a new kind of responsibility. The demand "*Teach me*" changes to the thought "*Let me learn!*".

Learning Organization - Community as a Learner

Peter Senge describes the building and management of a learning organization through five disciplines. The first is systems thinking, which emphasizes the community's ability to see the whole as the sum of its parts. It is also essential to understand the interactions between the parts. Systems thinking helps identify complex cause-and-effect relationships and understand one's role as part of the whole. Mental models refer to the beliefs, assumptions, and thought patterns of community members that affect their daily actions. Awareness of these mental models is important for the community to change, unlearn, and learn new things.

Personal mastery emphasizes an individual's lifelong growth and development. It challenges every learner to develop their own skills and abilities. Through setting and achieving learning and competence goals, everyone can reach towards their own dream future. The fourth discipline, shared vision, means that the community has a common goal and direction. The vision guides and motivates community members towards a collectively defined future. The final discipline is team learning, which emphasizes learning and collaboration within the team. Open communication in the team, good teamwork skills among team members, and psychological safety within the team create conditions for effective and enjoyable team learning.

Tiimiakatemia is built as a learning organization. It is led according to the principles of a learning organization. Team companies are guided to adopt the disciplines of a learning organization as guiding principles. Their implementation in everyday operations is regularly measured and evaluated.

Knowledge Creation - Individuals and Teams as Creators and Applicators of Knowledge

Nonaka and Takeuchi have created a knowledge creation model that describes the creation and refinement of knowledge within an organization. At the center of the model is the transformation of an individual's tacit, often difficult to articulate, knowledge into explicit knowledge that is visible and usable by the community. Tacit knowledge can be transformed into explicit knowledge through reflection and dialogue, for example. After this, knowledge can be verbalized and shared, for example through written plans and documents. In the final stage, knowledge is applied in practice, which generates new tacit knowledge for the individual.

The refinement of knowledge from an individual's tacit knowledge to community knowledge occurs through socialization, or social interaction. After this, tacit knowledge is shaped into explicit knowledge using various concepts and models. This phase is called externalization, and it forms the basis for creating new knowledge. The third stage is combination, which involves assembling conceptual knowledge into larger wholes, where it can be combined with previous knowledge and theories. The final stage of the model is internalization, which means understanding and applying previously created conceptual knowledge into practice. Applied knowledge generates new tacit knowledge, which can then be distributed to the community through socialization again. In Nonaka and Takeuchi's model, dialogue is a tool for creating more conceptual knowledge from tacit knowledge. Learning by doing is a way to apply learned theory into practice and thus create new tacit knowledge.

Tiimiakatemia has adapted Nonaka and Takeuchi's model into its own quadrant, which is based on the same idea of transforming tacit knowledge into explicit knowledge. Tiimiakatemia is a community that generates new knowledge and applies theory into practice. It values reading and listening to books, curiosity and wonder, modeling thoughts and theoretical knowledge, and creating new theories. Strengthening one's own thinking enhances the ability to apply theories in client projects and the everyday life of the team company.

6.3. Essential at Tiimiakatemia's Learning Model

Team, Team Company, Team Learning

As learners join Tiimiakatemia, they are formed into learning teams of about 15-20 people. The team establishes a cooperative, which allows the team to learn teampreneurship in practice. The members of the learning team and the team company are the same individuals for three years. This enables the team to develop into a top team, the cooperative's business to develop into

new spin-offs and growth companies, and the creation of a community of trust and psychological safety.

Coach, Coaching Process

Each team has its own coach. The team coach's work consists of weekly coaching sessions with the team, guiding individual learning, and sparring on projects and the team company's business. Coaches also serve as thesis supervisors and assessors of studies. In addition to coaching, coaches participate in the development work of Tiimiakatemia's community, JAMK RDI projects, or lead their own area of responsibility at Tiimiakatemia together with teampreneurs. Team coaches collaborate in weekly sparring and development sessions.

Learning Ecosystem within the Tiimiakatemia

Learning at Tiimiakatemia is based on four elements. To achieve effective learning, all four elements must function in everyday life. These four elements are 1) Learning Contract, 2) practical projects, 3) reading program and 4) dialogue exercises. The elements can also be titled 1) self-management, 2) learning by doing, 3) internalizing new information and 4) team learning.

The Learning Contract is a tool through which individuals define their learning goals, the means to achieve those goals, and the metrics by which they track their progress towards their goals. The learning agreement directs the individual's energy towards the right things and helps them progress systematically towards their goals.

Practical projects refer to learning by doing. It can be any business project with a client, where value is delivered through a service or product. The project provides an individual with a learning platform to progress towards their goals. The project cannot be a simulation; it must be real.

The reading program is a plan through which an individual acquires theoretical knowledge to implement their project. The reading program consists of books, research articles, or other relevant sources of information. It is essential that the individual applies what they learn from these sources into practice in their own project.

In dialogue exercises, knowledge acquired through the reading program, along with experiential knowledge, is transformed into new knowledge. When learners share experiential knowledge from their projects with each other, new connections and insights are created, accelerating the learning of all participants in the dialogue.

Teampreneur's Weekly Model

Team entrepreneurs are responsible for building their own work week. The basis is the model of 8 + 8 + 24. This means that eight hours are spent reading or listening to theory and writing reflections on them. Reflections are a way to structure what has been learned and apply theory into practice. Reflections are public, so every Tiimiakatemia's member can learn from each other's thinking. Another eight hours are spent training together within the learning team. The key tool for training is dialogue and the development of thinking together. Teampreneurs are responsible for facilitating and building the content of the training sessions. Coaches provide support and guidance to the facilitators as needed. The remaining 24 hours are spent on real client projects, creating their own product and service innovations, leading the team company, and building networks.

Ten Guidelines for Teampreneurs

- Take initiative, dare to seek guidance.
- Learn to manage chaos. It is the first step in the creative process.
- You are allowed to make mistakes. You can learn from them.
- Direct your energy towards solutions, not worrying about problems.
- Do your best and set your goals high.
- See opportunities, not obstacles.
- Dare to experiment and be yourself.
- Smile, enjoy, and dive in.
- Be humble and continuously recreate your success.
- Respect others and leverage the experience and knowledge within Tiimiakatemia so that you don't have to reinvent the wheel.

6.4. Results of Tiimiakatemia

Entrepreneurship and Employment

Immediately after graduating from Tiimiakatemia, approximately 30% of graduates continue as entrepreneurs. The established companies mostly resemble the Finnish business landscape, consisting of micro and small businesses or family businesses. Some of the well-known companies in Finland include Crazy Town Ltd, Ekolla Ltd, Foodin Ltd, Humm Ltd, Morton Ltd, and Way Out Ltd. Over the years, Tiimiakatemia has become a significant platform for growth for many young entrepreneurs in Finland, and its impact on entrepreneurship and business is considerable.

The employment rate of Tiimiakatemia graduates is approximately 90%. The professional profiles of Tiimiakatemia graduates include roles such as entrepreneur, coach, trainer, consultant, teacher, CEO, development manager, supervisor, HR manager, team leader, event producer, circular economy expert, sustainability communication specialist, marketing manager, communication expert, concept designer, sales manager, and project manager. The employment of these talented individuals often begins towards the end of their studies.

Competence and Networks

At Tiimiakatemia, competence is acquired in continuous learning, creativity, sales, marketing and customer thinking, project and team management, facilitation and coaching, communication and interaction, responsible team entrepreneurship, event production, and a global mindset. The learning method of Tiimiakatemia itself requires the growth of self-leadership skills, such as time management, goal setting, task prioritization, and maintaining motivation. Teampreneurs organize their own work weeks and set meaningful learning goals for themselves. Building their reading program and reading books develop theoretical knowledge and thinking skills. Writing essays and reflections strengthen written expression, conceptualization, and modeling skills.

The team is an important place for learning social skills such as listening, empathy, good communication, and emotional intelligence. In the team, members learn to utilize diversity and the skill of learning and working together. Giving and receiving feedback is also learned within the team. Genuine client projects teach solution orientation, planning, and analytical thinking. In projects, sales and marketing skills are learned, as well as self-leadership and team leadership. Projects also develop problem-solving skills, creativity, and the ability to apply theory into practice. Projects teach the use of project management tools.

The team company teaches productization, pricing, and the development of profitable business. As a team leader, customer, marketing, or finance manager in the team company, one gains a year-long practical experience of implementing leadership tasks. Leadership tasks in the team company enable learning about building and operating an effective management team. The team company also teaches how to establish a company, grow a business, and how to quit a business after its operation ends. Leadership tasks at Tiimiakatemia level (marketing, recruitment, community, internationalization, and alumni activities) provide insight into managing and leading a large organization.

During their time at Tiimiakatemia, lifelong learning skills grow and develop. Curiosity and continuous learning ensure the competitiveness of teampreneurs in the job market or success as entrepreneurs. Another important skill is extensive networks. Building networks is an essential part of a teampreneur's everyday life. Every teampreneur conducts customer visits and consciously builds a personal network. By spring 2024, the goal for each teampreneur is to

make 15 customer visits. The goal for Tiimiakatemia's managers and team leaders is to make 100 visits. Customer visits are planned, and their lessons are gathered according to the Motorola model. The purpose of customer visits can be to familiarize oneself with the industry and the company, sell one's own ideas and projects, or learn about a person's career and experiences. During their time at Tiimiakatemia, an active teampreneur can build an extensive network that offers job opportunities or entrepreneurial success.

Awards Received by Tiimiakatemia

Tiimiakatemia has received awards for its innovative learning method, promoting youth entrepreneurship, and collaboration with the business community.

- The Markkinaseppä ('Market Smith') Award, for marketing excellence (1994)
- Junior Chamber International Finland's Productive Idea Award, in the community category (1997)
- Young Peoples' Employment Promoter Award, European Union (1999)
- Education Centre of Excellence from the Finnish Ministry of Education (2000)
- Central Chamber of Commerce Finland's cross medal to Johannes Partanen for [developing](#) learning methods that promote entrepreneurship (2000)
- The Innofinland Prize, for innovative practices (2000)
- The Chamber of Commerce of Central Finland's 1st Prize of Export (2007)
- The President of Finland nominates Johannes Partanen with the honorary title of Counsellor of Education (2010)
- The World CSR (Corporate Social Responsibility) Organization nominated Head Coach Ulla Luukas as 'the 50 Most Innovative Leaders (2017)

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