

Developing Purchasing and Supply Management Skills in SMEs
– An innovative concept for transfer and development of urgently needed knowledge

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Abstract

Competence development is an important feature of supplier development projects. To make knowledge about new practices known and adopted by 3rd, 4- and 5th tier suppliers, normally SMEs, have however shown to be difficult. This is not only a problem of adequate concepts and resources, but also of didactics, on pedagogical methods. The paper describes and analyses one innovative methodology to spread knowledge and raise competence, namely the KrAft-program. We have followed one supplier development project that was run according to this concept, the Norrgavel case. To illustrate the methodology a case study of the KrAft-group Norrgavel has been carried out. It is a supplier development project.

Keywords: competence development, supplier development, kraft

Introduction

Purchasing and supply management is a critical function in most business firms, largely due to the fact that firms buy an increasing amount of their value added from external sources. Normally, the amount of purchased goods and services represents between 50 – 75 percent of the value of a firm's total sales (van Weele, 1997). As a direct consequence the purchasing function has undergone a lot of development and today many large firms work according to modern purchasing techniques such as supply management (Axelsson, 1998). In order to be competitive firms must adopt a purchasing strategy which often means – at least for parts of the activities - a switch towards working more interactively together with their suppliers (Lamming, 1993; Hines, 1994).

When it comes to SMEs, the needs are possibly the same, but the awareness of the modern practices is probably lower and so are in many cases the capabilities of carrying it out. The SMEs situation is different due to, among others, scarce resources available for learning and

testing new concepts (Noteboom, 1994). A survey targeting SMEs in a Swedish industrial district illustrates the effects of this. It revealed for example a very limited understanding for a wide selection of contemporary key concepts and practices in purchasing and supply management (Claesson & Erkgards, 2000). It had to do with the meaning of and reasons for the application of concepts such as systems purchasing, early supplier involvement in product development, supply chain thinking, etc. This is probably a severe shortcoming, both for the SMEs themselves and also for firms downstream the value chain as they depend on capable sources also among third, fourth and fifth tier suppliers. There is no reason to believe that the possibilities for improvements in purchasing should be lower among SMEs than among LMEs, maybe the contrary. But often, due to the SME-firms situation, they cannot achieve necessary improvement just by being asked to. There is normally a need for outside support. Supplier development programs are frequently the response to such needs, and it might work well further down the supply chain. But if also the customer is a rather weak actor with scarce resources, what happens? How can the knowledge base of SMEs be improved, and, thus, new purchasing and supply strategies be implemented? We think that the KrAft-concept is a very promising answer.

The KrAft concept

A recently developed concept for knowledge-transfer and development processes among SMEs is currently being implemented in Sweden. It is referred to as the KrAft-project (Kraft is the Swedish word for Power). Here it is used as an acronym where k stands for kompetens (competence), r for reflektion (reflection), af for affärsutveckling (business development) and t for tillväxt (growth). Within this project, groups with shared interests and knowledge needs are formed, each of which is provided with an academic coach responsible for the making available the substance in terms of knowledge asked for by the group. Furthermore a process coach with extensive practical experience is at the groups disposal in the field. In dialogue, the improvement needs of the participants of the group are identified and in an iterative process where academic teaching is interwoven with practical implementation, knowledge and skills are developed. The KrAft methodology is described in figure 1.

Please insert figure 1 here

The basic theme is business development and this could, in turn, demand that different measures are needed for different businesses. It is important that the learning process departs from the individual firm's specific situation. The coach and the academic project leader is there to support the development and bring in the external resources required. This kind of learning is not based on lectures with a number of power point slides. The learning process starts in SME- managers own business and he or she is an active part in the process. The basic idea in terms of learning models is very close to the Lewinian experiential learning model (Kolb, 1984) shown in figure 2.

Please insert figure 2 here

The Lewinian learning model starts with the concrete practical experience of the actors involved. Observation should be followed by reflection. The reflection part is followed by the

formation of more abstract concepts so that the reality observed could be generalised to be valid for the different actors. The model further suggests that these concepts are tested in new situations, which in turn creates new practical experience. In this way there will be an accumulated qualitative growth among the involved individuals and firms.

The KrAft-project applies these principles and supports them by the infrastructure described. The coach, the academic project leader as well as the other participants are to some extent supportive in identifying problems (observations) as the coach goes in the field to in dialogue supports practical field work. But even more so in the reflection parts. This is when much of the academic substance is infused. Experts available on demand are brings in the more generalized knowledge which then will be tested in each SMEs own reality.

As the project is not only about learning but also to make improvement happen in line with the learnt topics we need to analyze both aspects. To analyse the realized improvements we use the A-R-A model, from network theory developed by the IMP-group, focusing on activities, resources, and actors (Håkansson, 1987; Ford, 1998). A key issue is to evaluate whether the people and companies involved have improved their capability, have become more enabled, to in the future, continuously develop and improve their business. Our analysis of the very process is in this paper merely done as a reflection of opinions expressed by the participants.

Case description KrAft - Norrgavel

Introduction to the case

The research presented in this paper is based on participant observation of the meetings and in-depth interviews with the actors in the KrAft-group formed around the Swedish furniture producer Norrgavel. The company market products with attractive design based on key words as timelessness – should last for generations, genuine solid raw material, Scandinavian style, and strict coherent design. It has its own stores which act as show-rooms for the entire assortment. It is still a rather small producer and retailer in the field with a turn over of roughly 4 million Euro. Norrgavel is currently in the process of making a strategic internationalisation effort starting with the opening of a store in Copenhagen, Denmark. To be able to go international a supplier development (e.g. Larsson, 2001) project has been formed within the KrAft-project. The suppliers are challenged not only to improve their capacity (volume) but even more the professionalism in terms of lead-times, logistics utilising the possibilities of ICT etc. Three of the suppliers i the KrAft-group studied are carpentry shops, one is a producer of lamps, one imports carpets made to design and the last supplier is a flax producer (see table 1 below). All actors have in common that they deliver high quality and designed products that all contribute to the ambience of the Norrgavel stores and are important contributors to the Norrgavel brand. We thus have a group of suppliers who are all challenged by a customer and the vision expressed by that customer.

Table 1 Participating companies in the KrAft group Norrgavel

The KrAft group Norrgavel

Norrgavel, furniture manufacturer, acts as locomotive in the network

Ateljén i Anderslöv, lamp manufacturer (Zlamp)

Kathea, carpet importer

Lammhults Snickereri, furniture manufacturer
Stol och Fåtölj i Ruda, furniture manufacturer
Torsten Nilsson Snickereri, furniture manufacturer
Växbo Lin, flax manufacturer (table clothes etc.)

Norrgavel acts in this case as locomotive in the network (Lorenzoni, 1988). The other participants in this network are six of their suppliers. Altogether there is a group of 15 people as all firms have at least two participants. To be at least two is part of the concept, it helps in the reflection parts as well as when the company is to test our new ideas and practices as well as implement changes. There is at least one more similar group soon to be started with a selection of Norrgavels other suppliers. The program consists of 15 days in joint meetings divided into 7 times 2 days plus one day of introduction. The coach is expected to spend two days per company in the field during the project. And, as no schedules and no content were produced in advance, the time elapse between each meeting was around 6 weeks. Between each meeting with the whole group the all had exercised to prepare, in practice as well as some reading assignments. The duration of the entire process thereby equals to one year.

This set up we found to be especially interesting as a supplier development venture for several reasons. In the Claesson and Erkgards (2000) study, it was shown that in those cases when a 4th, or 5th tier supplier had learnt about the new purchasing and supply management concepts, it was due to strong signals from one or more of their customers. To put it sharp; the suppliers learnt of the new concepts on request by their customers. This is, furthermore, very much in line with lessons learnt from development cooperation between firms in general. An important and demanding customer provides a mix of challenge and security to make the improvement efforts a high priority (von Hippel, 1988, Håkansson, et al 1987). In this case we have a customer that is important for the suppliers involved and that customer is expressing its demands for improvements. Furthermore, in comparison with many other projects aimed at improving the capabilities among SMEs it is a learning process in a business context that will still prevalent after the project is finished. This should guarantee that the process is not likely to collapse when the project is finished.

The development process

In the following we briefly describe the activities that took place. We structure it along a chronological order with a focus on each occasion the group came together. One basic ingredient was also that every member of the network should act as hosts for at least one meeting. Each such meeting should start with a company-visit so that knowledge and understanding for the different actors businesses should be fostered. One basic idea in the total concept is that of learning *from* each other as well as learning *with* one another (Simonin, 1999). Below follows a short summary of the activities performed so far in the supplier development project. We have chosen to be more extensive in the beginning to provide a feel for the project, and make shorter presentations as the story moves on.

Meeting in Lammhult – Norrgavel 0104

The natural joint point of departure was to gather the group at the original, the very first of today's four Norrgavel stores. This is situated in Lammhult in Småland, a small community with an impressing number of furniture producers. The village and its' surroundings is

sometimes referred to “The Kingdom of Furniture”. Two of the suppliers are located in this area too. The others are come from much more remote places.

After an introduction and presentation of the involved companies and people it was a natural start for this very first day to look at mission statements and foremost the one by Norrgavel, the customer/locomotive. The CEO of the firm told the history of it, reminded about the basic values that form the vision and what impact it has on the products, the entire assortment, the ambience strived for in the stores, etc. Of course much of the overview was directed at the future challenges of the company and the promise as well as the barriers one could foresee. The vision also included the suppliers. The CEO wanted to make them come closer to the market of Norrgavel. “When a customer buys a chair in one of our stores it should ring a bell in the production site of the actual supplier”, she said. The message was one of the entire group of suppliers forming a team with the customer to increase market share, to make Swedish design, especially as it is exposed by Norrgavel, known and appreciated also abroad.

It was then natural to take a closer look at the other companies’ business ideas/ mission statements. Everyone described their view of their operations. Maybe not in such a streamlined way as the introductory one. Based on this it was natural for the coach and the academic leader to discuss business ideas as a concept, especially the systems character of it.

A second step was to ask for reactions by the suppliers to this challenge from Norrgavel. Was it interesting? Could they identify any shortcomings on their part to face the challenge from the customer? Were there any important areas of improvement needs to be addressed? Were there specific pieces of knowledge missing? Other important enablers like production equipment, ICT infrastructure etc was also asked for? All these possible shortcomings were listed on a white-board. The coach who already had visited all the suppliers once and the project leader from academy, had also prepared a list from which some further additions of possible knowledge- gaps could be made.

Based on this quite long list a first overview of possible and important themes for the joint development process was made. It was evident from the list and the frequent mentioning that various aspects of logistics was a key area, but various aspects of marketing weighted heavily too. Some of the other topics were contract law, accounting (calculating investments), production economies. The meeting ended by a joint agreement that the main issue for next and possible some coming meetings would be logistics. The participants also agreed on an assignment to, until next time, put down their mission statement on paper along with a description of strengths and weaknesses in general and specifically in relation to the present challenge. Furthermore they got some material on these topics to read.

The coming meetings will be given in more concentrated fashion.

Second meeting 010615-010616

Meeting in Värnamo - Kathea

Theme: Business ideas and logistics

The meeting started by a visit at the carpet importer who presented her business and, most of all, the logistics problems related to it. Among such aspects was the balancing between service level, availability of the products when the customer wants them, and costs of storing. Furthermore, a neighbouring furniture store renown for its’ history of avantgardistic design was visited and along with that followed the story of the firm that had a lot to do with design and marketing.

The core of the meeting included a review of all business ideas typed since the first meeting as well as a review on the topics in need for improvement. The participants presented their fulfilled assignments and got some comments. They were promised individual comments on their mission statements later. In order to introduce logistics the academic leader was complemented by an invited assistant professor in logistics. He described some of the core elements in logistics, a historical overview of the development in the field and current trends in that area. A general discussion about the relevance of the issues covered was also part of the exercise. In order to make progress and deepen the reflection part all participants were agreed to make a flow scheme the inward, internal as well as the outward logistics of their firm as a preparation for the next meeting. It was also clear that next meeting would continue to focus on logistics.

To support the fulfilment of this assignment a material and instructions was sent out. It did not, however, suffice. Some of the participants made contact and explained the difficulties. As a result the coach came and visited them all and supported the construction of the flow chart.

Third meeting 011019-011020

Meeting in Brösarp – Torsten Nilsson Snickeri

Theme: Internal logistics and MPS-systems

The host of this meeting was a company with 10 employees and with a rather old machinery equipment as well as a limited use of ICT. Last time it had been evident that Internal logistics could be improved with the help of ICT and, of course, equipment suitable for increased flexibility. A guest from a producer of MPS-systems targeting SMEs was invited to show how the system works and what possibilities such a system might bring to the actors in the Norrgavel network. During and after the presentation the participants were challenged with questions such as “in what ways do you think that a function such and such could have an impact in your case?” The degree of openness for possible influences varied considerably. Those who shouldn't really have that much to learn could express a lot of new ideas, but those who, according to the leaders of the venture should benefit the most, saw the least possibilities for renewal.

At this meeting the participants also presented the flow schemes covering activities and measures of the time each activity takes, produced since last meeting. That led among others to a discussion on similarities and differences in terms of logistics problems in each of the company. The intention was to thereby give room for reflection and some generalised learning.

In the ending part of the meeting Norrgavel had a proposition to make in line with a vendor managed inventory concept. This was discussed in groups of firms, in general and with specific focus on the consequences for the participating firms. The assignment to next time was to further develop this concept and to decide on needed improvements of routines as well as knowledge and equipment to match it. Furthermore an assignment to “put money on the flows” was agreed on.

Fourth meeting 020215-020216

Meeting in Lammhult and Jönköping – Lammhults Snickeri and JIBS

Theme: Introduction to finance and introduction to marketing (brands).

This time the meeting started at a similar firms as last, but in this case a much more technological firm. It made a nice contrast to the previous and a lot of room for reflection.

During the time passed between the two meetings it had turned out to be difficult for the participants to really be able to “put money on the flows”, even though they had some text-material at their support. As a preparation for the assignment a student had helped one of the firms, Stol och Fåtölj, to carry out a production analysis and CNC simulation of one product. This was used as a demonstration and as a possible role-model.

Further, an assistant professor in finance was invited for two hours to teach on the subject as well as to discuss the impact of savings in logistics costs. Return on investments from logistics using the DuPont-analysis was a way to further the discussion on possible ways to improve logistics. It is a robust way to illustrate what different courses of action will do to the return on investment.

Outside the activities of this project the normal business goes on. Since last time the challenge by Norrgavel had matured into a suggested formalised agreement in line with vendor managed inventories but also some other commitments for each party. The variables involved in the agreement were confronted by the DuPont matrix as a preliminary test of consequences and critical numbers. It was decided that the assignment for next meeting would be to carry out a DuPont analysis with accurate numbers from each involved firm. Instructions on how to do that as well as some readings about the method was asked for.

The CEO of Norrgavel was also invited to show some of the other development. The company was ready to invest in a software that could connect all the suppliers to Norrgavel more tightly. They could be part of all the news from their customer, a tight follow up on sales and even to by a web-based interface get that “ring” in their production site when one of their products has been sold. This was received very positively and was presented as part of the bargain (the agreement that Norrgavel had prepared).

A PhD Candidate specialising in brands was invited to give a talk about branding, mostly in connection to B2B. This made quite many ideas arise among the participants. A follow up and continuation was promised. Before the next meeting, all participants shall thus produce a DuPont scheme with consequences of different changes for their firm attached to it. Furthermore, they should start thinking about the ways in which they build their brands. A reading assignment is distributed.

Fifth meeting 020412-010413

Scheduled meeting in Malmö – Ateljén i Anderslöv

Theme: Marketing continued (trade fairs) plus production design.

Sixth meeting 020524-020525

Scheduled meeting in Bollnäs – Växbo Lin

Theme: Marketing continued, especially branding.

020614-020615

Scheduled meeting in Ruda – Stol och Fåtölj

Theme: Still to be agreed on.

September 2002

Not yet scheduled meeting – Copenhagen (together with the opening of Norrgavels new store)

Some results of the work so far

The project is devoted to strategic development, in the case of Norrgavel, especially supplier development. From the description of the process it is evident that there have been a lot of learning activities going on. There have been a number of temporary deadlocks and other difficulties, but for the most part the process has been run in a very good mode and a nice focus on learning.

In addition to the basic KrAft- concept we have, in this case, made a regular follow up between the meetings. One reason for that is to get a better feel for the development in the group and to make sure that they all find the project rewarding and relevant. But it is also one more pedagogical point attached to the procedure. As the interviews are made by the researcher, the participant observatory, he has a good chance to confront the participants and their reflections during these calls. It should remind and help them in their process of creation their understanding of their experiences.

In this section we look at the development in two aspects: the participants view of the process as such and the ways their firms have (if at all) realised changes and thereby developed.

Comments and reflections on the process as such

Here are some voices expressing typical points of view:

"Nice with a mixed group. It gives different perspectives." (Lammhults Snickereri)

"The process fits like a glove." (Katheia)

"I think that the overview of the business system was very interesting even though it could not be a concern for our firm yet." (Ateljén i Anderslöv)

"We are very happy with the meetings." (Ateljén i Anderslöv)

"The most important thing when starting up these kind of networks is when you talk over a beer after the day. It is then that trust is established." (Stol och Fåtölj i Ruda)

"Couldn't we decide that we keep meeting like this also after this project is finished?"

There have been cases the participants have been somewhat frustrated and may be not fully motivated, but the general attitude is very positive. It seem as if they all feel that it is close to their everyday business. Maybe, the constant presence and pressure from Norrgavel contributes to this feeling. Furthermore, by luck and by putting attention to it the project leaders have managed to create a very good, generous, humorous and serious atmosphere.

Comments and reflections on the business results as such

Here are some quotes from interviews expressing some of the progress made:

"I have been thinking about how we could reduce our lead-times by changing our raw material stock We will soon do something about it." (Lammhults Snickereri)

"We have changed our production flow and outsourced the earlier stages in production, such as sawing and drying." (Stol och Fåtölj i Ruda)

"The presentation of MPS-systems has given me a number of ideas on how to improve our system." (Lammhults Snickereri)

"This is not relevant for us (Ronny Nilsson commenting on IT business systems)" (Torsten Nilsson Snickereri)

"I definitely need some kind of IT-support to be able to grow". (Kathea)

There has been a lot of discussion among the furniture manufacturers about the possibilities to save time and money by the use of CNC-machines. At Lammhults Snickereri they have had one for quite some time and Torsten Nilssons Snickereri has just recently bought one.

"We rearranged our production to make sure that the CNC-machine were put on it's right place in the production flow". (Lammhults Snickereri)

"There was only one free space to put the CNC-machine". (Torsten Nilsson Snickereri)

"We have decided to move into new facilities together with another firm 20 km away from our present location in order to be able to, jointly, exploit a new CNC- machine" (Stol och Fåtölj)

The different views on how to make use of one such has caused a lot of discussions and, as a consequence, a lot of learning both from and with each other. It has also been important to generalise, to make the other firms realise in what ways the same problems appear in their business.

We saw a video about how a production organisation can be rearranged into a flow organization.

"I'm thinking about how we can transfer this knowledge to our business. We have very old machinery and it might be difficult for us to apply such principles". (Växbo Lin)

In order to increase communication between the actors in the Norrgavel network Norrgavel will include their suppliers in their internal IT-system, Chain-brain. The CEO of Norrgavel Maria Månsson described the system and asked the suppliers for comments and reactions.

"We need information about sales and about sales drives." (Styrbjörn commenting on the information needed on the chain-brain system.) (Stol och Fåtölj)

"This looks perfect. I think this will be of great help for us" (Barbara commenting the chain-brain system.) (Kathea)

If we relate these changes of substance to the A-R-A- model we can in almost all firms see changes of activities in- and outbound as well as inside the firms. We can also notice a number of developments of resources to carry out these activities in new ways, not only improved resources inside the learning individuals. Furthermore, there are also quite a number of changes of the division of labor between the involved firms. There are examples of changes in who is responsible for the stocks at Norrgavel, outsourced functions when a firm like Stol

och Fåtölj goes from buying raw-material to components with more value added and so forth. We do not, however, argue that all this is because of the KrAft- project. But it has definitely been a catalyst.

Conclusions and implications

From the Norrgavel case a number of lessons can be drawn. One of them is that the willingness to change on individual level, the possibilities to change on a company level, and the so called industrial wisdom are necessary aspects to consider and carefully work with in the supplier development process. It has, again, been proved that a dedicated customer is important for joint learning approaches. We also see that the experiential approach has been very fruitful, even though it needs to be supported by a well thought through process. Important ingredients in that process are not only the academic leader and the coach, but also the ways in which they and others act. The dialogue in itself, to support sense making and understanding what is really learnt, the generalised knowledge, is one such aspect. To make the reflection part a genuinely learning one and to connect it to literature is a way to “learn how to learn” and without that the results will be short-lived. Another is the be able to reach the good atmosphere in the group that enables them to learn from one-another.

For the final user or first tier supplier with the resources to manage such a development process by themselves, it could still be highly relevant to take the KrAft pedagogy under consideration. Supplier development is not a one time and/or one aspect venture. E.g. so called Advanced Purchasing Teams could be made available by large firms to support their subcontractors, but hardly for customer firms further up the supply chain. Finding ways to improve subcontractors, at all layers, and especially their abilities to continually develop and improve, should be a prioritized mission.

For the managers of SMEs this means that personnel should be exposed to developments in purchasing and supply management, also conceptually. They should, furthermore, be aware that competence development is not just a matter of learning at school, but learning in the field is vital. There are new methods available that should make it possible to adapt the learning process to each individual's ”learning style” and with better availability of e-learning opportunities it will be easier to find actors with experience and knowledge from similar improvement projects on the net.

Finally, we argue that policy makers in other countries should take a closer look at the Swedish KrAft method for learning as it offers an efficient way of using resources in a highly relevant area.

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Figures

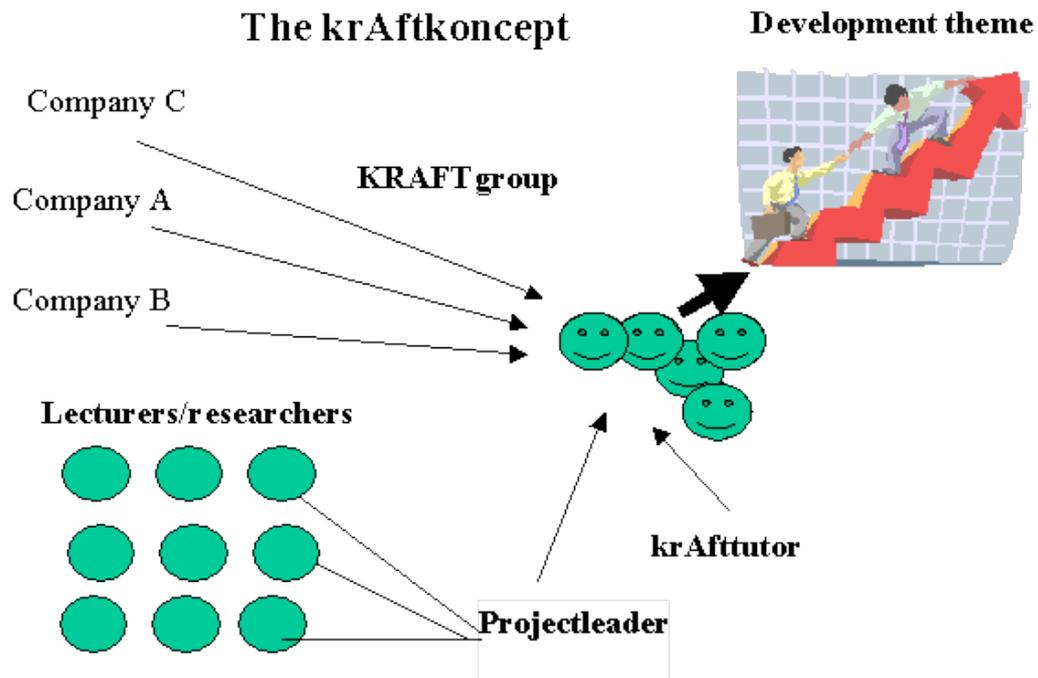


Figure 1 The KrAft concept

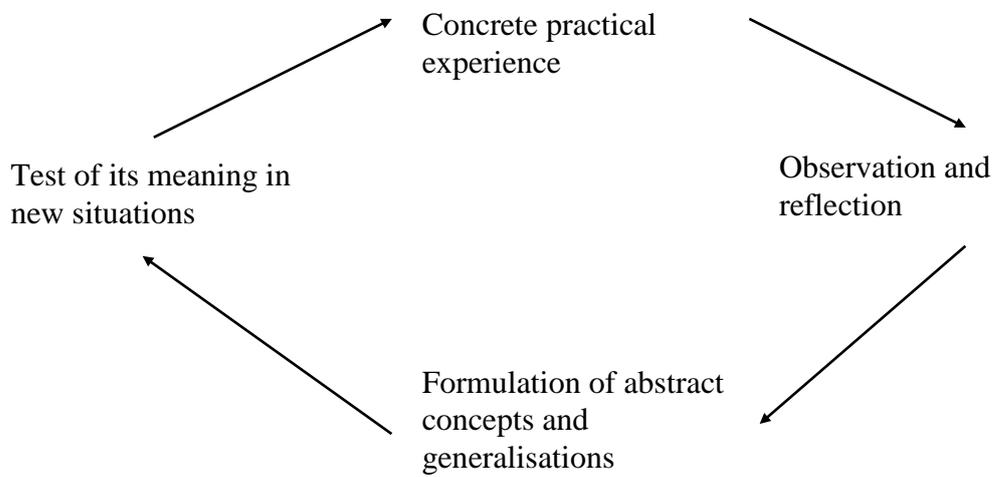


Figure 2 The Lewinian Experiential Learning Model (Kolb, 1984:21)