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Geographical indication in the process of creating knowledge to develop new competences

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The protection of geographical indication is considered to be strategic for Brazil. The state of Santa Catarina, especially Goethe Grape Valley, was acknowledged as the first Geographical Indication (GI) to encourage various disciplinary studies, mainly from the view point of law, economy, intellectual property and regional impact. However, there is no evidence in interdisciplinary studies aimed to understand the influence of GIs development with winegrowers and wine producers of this region. Taking these gaps into account, this study intends to check up how the acknowledgement of GI by Goethe Grape Valley Indication of Origin can contribute to creation and development of new competences in wine culture and winemaking. For that purpose, a descriptive, exploratory study with qualitative approach was developed. The creation and change of routines and activities, insertion of new techniques of traceability control, as well as information intending to improve monitoring and control of the origin of each grape in wine barriques was noticed. The authors identified that GI, besides contributing to local development, promotes new competences of winemakers from the very moment of execution of rules and procedures documented in wine production process imposed by Regulatory Council; information-sharing and search for methods that improve their product. One can conclude that geographical indication created new knowledge in production processes and increased winegrowers' competence level. From the implementation of IPVUG the study allowed a more efficient management of properties and of wineries, because the production volume is controlled, also the place, volume and sampling harvest are traceable. The study also provided a better cost control, which consequently led to more efficient production strategies and wine distribution.

Key words: Knowledge management, Knowledge creation, Geographical indication, new competences.

INTRODUCTION

Current economic environment is increasingly characterized by knowledge as a key element to improve and promote innovation and competitiveness of organizations (Dangelico et al., 2010). Finding alternatives

that help in creating information and knowledge over the impact of geographical indication for knowledge creation to the organization, leads to new opportunities of information-sharing to develop new competences

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among winemakers and wine industry as well as other areas with similar interests such as organizational decision making, building information systems to ensure traceability and quality assurance of products.

In this sense, Saraceni et al. (2012) state that information and knowledge comprise fundamental resources in knowledge management and economic and productive development.

The process of knowledge creation is seen as continuing through which the boundary between individuals transcends. This process involves interaction between individuals, groups and organization (Nonaka and Takeuchi, 1997; Popadiuk and Choo, 2006).

In order to develop the capabilities of people, Gavioli (2011) argues that it is necessary to follow some steps, such as the acquisition of competences, obtaining qualification, use of an occupational space and adding value. In this context, one could say that a capability helps to mobilize knowledge in order to cope with a given situation. Competence is not the static use of simple rules learned, but an ability of innovative and creatively making use of various resources, at the time and mode needed.

Phases defined by Gavioli (2011) follow the natural sequence of development of an individual who acquires competences, although their interests are aroused, their competences are discovered and their knowledge, constructed. People are attracted to an area of activity in which qualification should be obtained; once qualified, they use an occupational space, compatible with their maturity level, which provides a set of competences, for which one should respond.

In this context, geographical indication has emerged as an alternative that allows mobilizing tacit knowledge among winemakers thereby consolidate new competences in order to face a new situation of occupational space and adding value to Goethe wines. Geographical indications (GIs) are one of the most sophisticated and complex qualification devices found in food markets nowadays (Niederle, 2013).

However, it is not enough that a given region becomes known only by producing differentiated products. It is necessary to advance the debate over the relationship between strategies based on the origin, value of culture and tradition, protection of environment through sustainable development and consolidation winemaker and vintner's knowledge to ensure the wine's characteristics.

In this sense, Cerdan (2013) states that IGs can be an instrument of relevant market and rural development, providing new opportunities for rural regions. However, the effects of GIs in rural development are not automatic or predetermined; they are often difficult to learn, besides depending on various internal and external factors being the most important the support of the institutional framework, such as: support institutions

and public policies.

However, the research conducted in academic and scientific literature, no studies demonstrating that theories of knowledge management can help make the process of implementing the most effective and useful for organizing geographical indication were found. Though, little is known about how geographical indication is used for knowledge creation and whether it allows knowledge creation in order to develop new competences in the organization.

With this approach, this paper aims to determine how the geographical indication can contribute to knowledge creation and development of new competences in winemaking and viticulture, based on the experience of the producers of Goethe Grape Valleys region located in the municipalities of Urussanga and Pedras Grandes, State of Santa Catarina. The research intends to verify the process of knowledge creation to develop new competences together with members of Progoethe with the objective of achieving the recognition of the Seal of Goethe Grape Valley Indication of Origin.

MATERIALS AND METHODS

The present study research uses the taxonomy presented by Vergara (2009) as methodological foundation, which is qualified in relation to two aspects: the end and the means of investigation.

This research is characterized as an exploratory study with qualitative approach and, regarding means of investigation, it is considered a bibliographical study. The means of investigation used for this bibliographical study will be secondary sources, such as: national and international scientific articles, Doctorate thesis, Master dissertations, books and websites. With respect to the purpose, the study can be characterized as descriptive. It also has a qualitative character, once the method of study case will be used while the investigation is being conducted. The very nature of the case study is "an attempt of clarifying a decision or a set of decisions: why it was done and with which work" (Yin, 2005). Theoretical review is done by means of knowledge management approaches and through the acquisition of new competences, in addition to main approaches of Geographical Indication and Goethe Grape Valley in Urussanga, State of Santa Catarina.

This study had as its main goal to examine how geographical indication can contribute to knowledge creation and development of new competences in wine growing and wine production, focusing on the study of the Goethe Grape Valley, region of Urussanga and Pedras Grandes, South of Santa Catarina State. The study tries to understand the process of knowledge creation and development of new competences together with Progoethe associates with the objective of

achieving the acknowledgement Seal of Goethe Grape Valley Indication of Origin.

Interviews with three members of the association Progoethe from a script semi structured questions were applied. The interviews were conducted at respondents' workplace of in previously scheduled times and dates. According to Table 1, some questions were developed in order to check how it can happen to knowledge creation in organizations. These questions were supported in concepts of knowledge creation based on the authors identified in the literature review, in such a way that it allows the definition of the elements to investigate the occurrence of knowledge creation. With respect to the concepts raised in the literature review, categories aiming a better visualization and analysis of how knowledge creation happens in organizations will be created.

The authors interviewed Progoethe chairman and the partner proprietor of a wine producer associated to Progoethe and Goethe grape wine producers. An oenologist from EPAGRI, which also is Director of Indication of Origin Regulating Board was also interviewed. The interviews were held at the interviewees' workplace, in a previously scheduled date (March 19, 2013) and the interviewer used a script.

KNOWLEDGE MANAGEMENT

Knowledge management brought a new conceptual, managerial and computational tool, which allows small to medium-sized enterprise (SME) to give a better treatment to "knowledge" which is the main raw material that ensures differentiation and competitiveness nowadays.

The comprehension of what Knowledge Management implies, necessarily, in systemic coordination of efforts in different levels: organizational and individual, strategic and operational, and formal/informal standards. In particular, when one speaks about Knowledge Management, discussing the following questions is necessary in many dimensions: (1) rule of top management; (2) new work organization practices; (3) development of specific processes to ease the generation, organization, dissemination and reuse of organizational knowledge; (4) practices and policies of human resources management; (5) new information and communication technologies; (6) new ways of measuring organizational outcomes; and (7) new ways of learning from the environment (Terra, 2001).

According to Nonaka and Takeuchi (1997), Knowledge Management is the process of conversion of individual knowledge, which is constituted by actions related to knowledge creation in order to ensure the sustainability of the organization. To Davenport and Prusak (1998), it is a fluid mixture of experience; it is a

set of processes whose goal is the creation and use of knowledge in order to achieve organizational goals. Choo (2003) complements that the organization holds information and knowledge which make it well informed and give it advantage. To Mitri (2003), knowledge consists of facts, ideas, models and information. Santiago (2004) clarifies that knowledge means organized information, with the understanding of its meaning. Data are that of less value and need to be manipulated and improved so that they have some value and, from this point on, turn into information. Santiago (2004) states that face-to-face contact and informal conversations are necessary for the dissemination of tacit knowledge. According to the author, it may be furthermore necessary to be able to adapt him/herself to this new scenario of informal conversations in order to disseminate new knowledge and recognize new challenges. In addition, Song and Weggeman (2006) claim that Knowledge Management is understood as the information which was validated by experience which got into the organization and is proving to be good for its performance.

Therefore, Knowledge Management is a process of conversion of knowledge through actions related to creation and dissemination of this knowledge, which give advantages to the organization in order to ensure its sustainability (Choo, 2003; Nonaka and Takeuchi, 1997; Song et al, 2006).

Process of creating organizational knowledge

According to Nonaka and Takeuchi (1997), the basic conceptual structure concerning the ways of managing knowledge creation process has two dimensions - (1) ontological dimension and (2) epistemological dimension -, as described below.

1. Ontological: knowledge can only be created by individuals. An organization itself cannot create knowledge. Its scope is to support individuals and provide them condition for that. The existence of organizational knowledge is possible through interactions which allow its creation in an individual manner, as well as its dissemination for the organization.

2. Epistemological: according to this dimension, there is two knowledge groups:

Explicit: this kind of knowledge is objective and easily captured, codified and shared. This knowledge is transmissible in formal, systematic language; it is formalized in texts, tables, charts, pictures, drawings, schemes, diagrams etc., easily organized in databases and in publications in general, in paper or in electronic files. Tacit: this knowledge is found essentially in people's heads. It is a subjective knowledge, based on

Table 1. Survey to verify how knowledge and new competences creation will be observed in Progoethe Association.

How can this knowledge creation (Category)	As was noted / investigated the creation of knowledge in this research (Subcategory)	Questions
1. Increase the knowledge base of the individual. (CHOO, 2003; Dangelico et al., 2010; Melo, 2003; Nonaka and Takeuchi, 1997; Santiago, 2004; Vick et al., 2009).	The person recognizes that learned or acquired new knowledge with the implementation of Progoethe geographical indication.	(P1) In your perception, you acquired new knowledge (learned something new from the implementation of the geographical indication in Progoethe?) If so, please explain how.
2. Use socialization to transfer knowledge to other individuals in the organization. (Choo, 2003; Dangelico et al., 2010; Davenport and Prusak, 1998; Melo, 2003; Nonaka and TAKEUCHI, 1997; Santiago, 2004; Vick et al., 2009).	How were released (and been) the new knowledge about geographical indication of a person to other people Progoethe (socialization of knowledge between people).	(P2) In their perception, new knowledge of individual geographical indications was / are transferred / disseminated to others in Progoethe? If so, how?
3. Interactive diffusion of knowledge among the different levels of the organization. (Dangelico et al., 2010; Melo, 2003; Nonaka and Takeuchi, 1997; Vick et al., 2009).	As it happens (and it happens) the interaction between the different winemakers to disseminate knowledge about geographical indication (socialization of knowledge among winemakers).	(P3) In their perception, new knowledge on geographical indications were / are disseminated among winemakers? If so, how? (eg, through meetings and other forms of interaction between sectors).
4. Restructuring the organization, creation / modification of new routines. (Choo, 2003; Dangelico et al., 2010; Nonaka and Takeuchi, 1997;. Santiago, 2004).	Creation and / or modification of routines and activity; procedures in order to implement due to the geographical indication in Progoethe.	(P4) There was creating and / or modifying routines (activities / procedure) in viticulture due to the implementation of a geographical indication? If so, cite some examples. (P5) If the answer is yes, this happened in a specific viticulture or more? How (at the same time or gradually)?
5. Increase the variety of requirements. (Choo, 2003; DANGELICO et al., 2010; Nonaka and Takeuchi, 1997; YAKHLEF, 2005).	Adding new items or procedures in the winemaking process.	(P6) During the implementation of the geographical indication in Progoethe, there were additions of new requirements or types of procedures originally proposed? If so, what and how?
6. Consultation of scientific and technical publications and materials. (Dangelico et al., 2010).	If there was a need to consult technical materials to implement the geographical indication in Progoethe.	(P7) was necessary to consult technical and / or scientific to implement the geographical indication in Progoethe materials? (P8) What were the difficulties faced in the initial transition to implement the geographical indication?
7. Relevance and effectiveness of knowledge about geographical indication for Progoethe. (Choo, 2003).	If there was a meaning to assign merit and importance to new information and new knowledge of geographical indication for Progoethe. If the application of the geographical indication is perceived as useful for members Progoethe.	(P9) In your opinion, is there any advantage / positives to use the geographical indication in Progoethe? (P10) In your perception, what is the use of the geographical indication? How useful is it? (P11) The information and knowledge created by the geographical indication is used to make decisions in Progoethe? In which way?

Table 1. Cont'd

8. Increase new competences (BOOG et al., 2002; Gavioli, 2011).	If there was the inclusion of new techniques and competences in the process of geographical indication.	(P12) There was a need for inclusion of new knowledge, competences and attitudes? (P13) There was a mobilization of professional experience changed with the geographical indication?
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Source: created by the authors, based on the research.

personal experiences which are specific to a context. For this reason it is difficult to be formulated and communicated; it corresponds to capacities inherent to a person; it is a system of ideas, perception and experience difficult to be formalized, transferred or explained to another person. Yakhlef (2005) contemplates knowledge as cumulative, built on and from previously created knowledge. In contrast to other organizational activities, knowledge creation does not need to be located in a certain place and time, or to be monitored. Creative ideas and *insights* are not necessarily created while the activities are being executed. In contrast to physical resources, ideas are transferred and, at the same time, is not lost, since an individual share these ideas with other people and keep having them.

Based on this distinction, Nonaka and Takeuchi (1997) claim that there is an assumption that human knowledge is created and expanded through social interaction between tacit and explicit knowledge, what is called "knowledge conversion". It happens in processes such as socialization, externalization, internalization and combination.

According to Nonaka and Takeuchi (1997), knowledge occurs from a knowledge spiral based on personal commitment and in many processes of conversion between tacit and explicit knowledge, involving the individual and the group, organization and the environment. Knowledge conversion cycles, when undergo these four processes (socialization, externalization, internalization and combination) assume a spiral form that serves to analyze and understand many cases of creation and dissemination of knowledge, having in each case its particularities or specificities, as per described below.

Socialization: from tacit knowledge to tacit knowledge

The process of socialization happens during the conversion of part of a person's tacit knowledge into the

tacit knowledge of other person. This kind of conversion is also approached by theories linked to organizational culture and to group work. A synthesis of this conversion may be the face-to-face knowledge exchange between people.

Externalization: from tacit knowledge to explicit knowledge

The process of externalization happens during the conversion of part of an individual's tacit knowledge into some kind of explicit knowledge. Such conversion is little approached by other management theories. As an example, it can be mentioned the registration of knowledge of a person made by him/herself.

Combination: from explicit knowledge to explicit knowledge

The process of combination happens during the conversion of some kind of explicit knowledge generated by an individual and which will be added to the explicit knowledge of the organization. This kind of conversion is also approached by theories linked to information processing. The example to be mentioned can be the grouping of knowledge registries.

Internalization: from explicit knowledge to tacit knowledge

The process of internalization happens during the conversion of parts of organization's explicit knowledge into and individual's tacit knowledge. Such conversion is also approached by theories linked to organizational learning.

For this to occur, however, an adaptation of tools, language and managerial practices related to Knowledge Management to possibilities, challenges and financial conditions of organizations is necessary.

Knowledge Management requires, on the other hand, that leaders of organizations understand essential concepts that base the techniques and tools used in organizations. It demands a high level of awareness by the organization regarding the changes in external scenario and also in employees' professional and personal expectations.

According to Nonaka and Takeuchi (1997, p. XXII):

Organizational knowledge is the capacity that an organization has of creating a new knowledge, disseminate it in the organization as a whole and incorporate them to products (or services) and systems (processes).

Based on a survey held in literature, it was observed that Nonaka and Takeuchi (1997) identify and understand how knowledge creation in organization happens:

1. Increase of an individual's tacit knowledge base.
2. Use of socialization in order to transfer this knowledge to the organization, releasing the individual's tacit knowledge.
3. Interactive diffusion of knowledge between different levels of the organization.
4. Increase in the variety of requests, organization restructuring and introduction of creative chaos in the organization.

Creation of new technologies and new processes which demand continuous innovation. Knowledge achieves equal value and is equated to a resource of competitiveness power in organizations which have the ability of creating new knowledge and disseminate it in its totality.

There is an increasing recognition of the fact that the key to knowledge creation is in the interlinking between tacit and explicit knowledge. In this context, Knowledge Management is seen as a facilitating agent, allowing organizations to develop and to be more competitive. Knowledge is a mixture of experiences, values and contextual information which gives a structure to evaluate and incorporate new experiences and information. It is applied in the minds of people in order to develop the competences and competencies to improve entrepreneurship.

Development of competences

The increasing business competitiveness has driven major changes in the business environment and an alternative to improve the organization in business is the ability to organize their own skills.

In this sense, training has been used as a tool for improving and adding new knowledge, skills and

attitudes that are a set of characteristics that, when combined, bring competitive advantage for organizations (BOOG et al, 2002).

A kind of organization that has met with a strong need to improve their capacity for internal organization are vitiviniculturas and viticultores, which require technical knowledge of your area for ability to flexibly deal with the market contingencies.

In knowledge era, skills development within organizations requires the construction of knowledge, according to the skills and interests in the acquisition of capacities in a particular area of professional practice. It requires that, in addition to skills, domain the field of ethical values and technical rigor specific to their own area of expertise technical accuracy, besides being updated with the best market practices. And above all, it requires that individuals who are able to mobilize the knowledge through their professional experience and their capacity for abstraction (Gavioli, 2011).

According to Takahashi and Fischer (2010), the development of competences demands deep changes in the articulation of organizational and institutionalization of new knowledge. Data found have revealed that some skills can be built while others are deconstructed by configuring the dynamic nature of skills development and the learning process.

In this sense, North (2010) states that knowledge implies an ability to relate inputs and outputs, observe the regularity of information, besides coding, explaining and predicting. This ability or capability also qualifies as a competent person or organization. Competences are realized at the time of knowledge use. These skills are the link between skills and technologies based on knowledge that create value for customers, are unique among the competition, manage the entry into new markets and are not easy to imitate or transfer.

Yet, Gavioli (2011) states that the development of competence can be achieved after the result of constant and autonomous exercise of skills in which an individual is recognized as qualified for use in an occupational area in which proceed by a shaft Career with different levels of complexity, mobilizing knowledge intensively, through a rich professional experience and capacity for abstraction, with a view to adding economic value to the organization to the individual and social value.

Based on the concepts of competence is possible to affirm the importance of integrated work with professionals, so called organizational competence, which is built from the history of the organization, internal or informal cultures values, combination of individual and collective knowledge, as well as production methods transmitted formally to achieve organizational goals.

In order to improve and strengthen the skills of wine growers, this study examines the process of

Geographical Indication as a means to collaborate in the development of their competences.

Geographical indication

Geographical indications for Market purposes are a way of differentiating products, in wine market; it is a fairly widespread characteristic. However, taking wine as an example, one can observe that it is a product with many extrinsic and intrinsic attributes, which make the choice of purchasing wine a quite complex task. Taking this conclusion into account with other kind of products, turning Geographical Indication into something that draws consumers' attention requires well planned market actions (Glass and Castro, 2009).

The producers search for achieving Geographical Indication allows the development of products with superior quality, creating a market differential. In this sense, instead of sticking exclusively to production increase and decrease of cost, a market strategy with different products is an alternative to producers that encourage good economic results. In studies held by Glass and Castro (2009) this interference is supported by results obtained from wine study, in which most consumers researched, would be willing to pay more for wines with a seal of Geographical Indication in the label.

Brazil, aiming to internalize TRIPS (Trade Related Aspects of Intellectual Property Rights) standards, issued the Law number 9.279/1996 (BRASIL, 1996), in the article number 176 and following articles, which define what constitutes a geographical indication: an indication of origin and denomination of origin. The article number 177 defines the indication of origin (IO) as the geographical name of the country, city, region or location of its territory, which got renowned as a center for extracting, producing or manufacturing certain products or rendering a certain service. In its turn, the article number 187 defines origin denomination (OD) as the geographical name of the country, city, region or location of its territory, which designate products or services whose qualities or characteristics are due exclusively or essentially to geographical means, including natural and human factors (Vieira and Bruch, 2012).

Aiming the return to the market and the acknowledgement of national scenario, as already observed in 1950, was the wish of Progoethe associates. Besides the perpetuation of Goethe Grapes Valley, they wanted to achieve regional economic development through production increase, generation of new job opportunities, or by increasing wine tourism. According to Vieira and Bruch (2012), a cycle was observed after Indication of Origin process, in which different sectors ended up to be linked and

interdependent, which benefit the collectivity.

Pursuing market, according to Fagundes et al. (2012), Indication of Origin increases and stabilizes product demand, as consumers know that the seal of Geographical Indication means quality products, with regional characteristics. Besides, this product is easily identifiable from others. Yet, according to IPVUG Manual, the main objective of the seal is to protect the quality and origin of products, aiming consumers' safety and acknowledgement.

To Vieira and Bruch (2012), the protection of geographical indications is strategic to Brazil, due to the potential to produce unique products in order to fulfill demanding markets in terms of products with personality and high quality. Once protected and following the precepts of "Goethe Grapes Valley Indication of Origin" in terms of quality and commitment with Goethe grape products, the region of Urussanga (Santa Catarina) is back to national wine production scenario.

From this move, in February, 2012, ProGoethe Association achieved Goethe grape Valleys IO for White wines and sparkling wines obtained by *charmat* and *champenoise* methods. This region comprises the slopes of Serra Geral and Southern Santa Catarina coast in Urussanga River basing, comprehending the municipalities of Urussanga, Pedras Grandes, Cocal do Sul, Morro da Fumaça, Treze de Maio, Orleans, Nova Veneza and Içara, located in the state of Santa Catarina. Around 100 rural producers grow Goethe grape, a hybrid of *Vitis viniferas* with American grapevines.

The Genealogy of Goethe grape can be observed in Figure 1. The grapevine was named after the outstanding German thinker, according to Velloso (2008); Vieira and Bruch (2012), elaborated by Edward Staniford Rogers.

PRESENTATION AND ANALYSIS OF FIELD RESEARCH DATA

IPVUG – GOETHE GRAPE VALLEY INDICATION OF ORIGIN

Goethe Grape Valley Indication of Origin located in Urussanga, Santa Catarina, is fruit of the ancient history of colonization of the South of Santa Catarina. "Goethe Grape Valley" is comprised by eight municipalities: Urussanga, Pedras Grandes, Morro da Fumaça, Cocal do Sul, Treze de Maio, Orleans, Nova Veneza and Içara, also named region of Vieira (Watanabe and Bruch, 2012) (Figure 2).

Urussanga's settlers, according to Maestrelli (2011) come from the region of Veneto, from the Piave River Valley, from Belluno and from Trento - Italy, from where

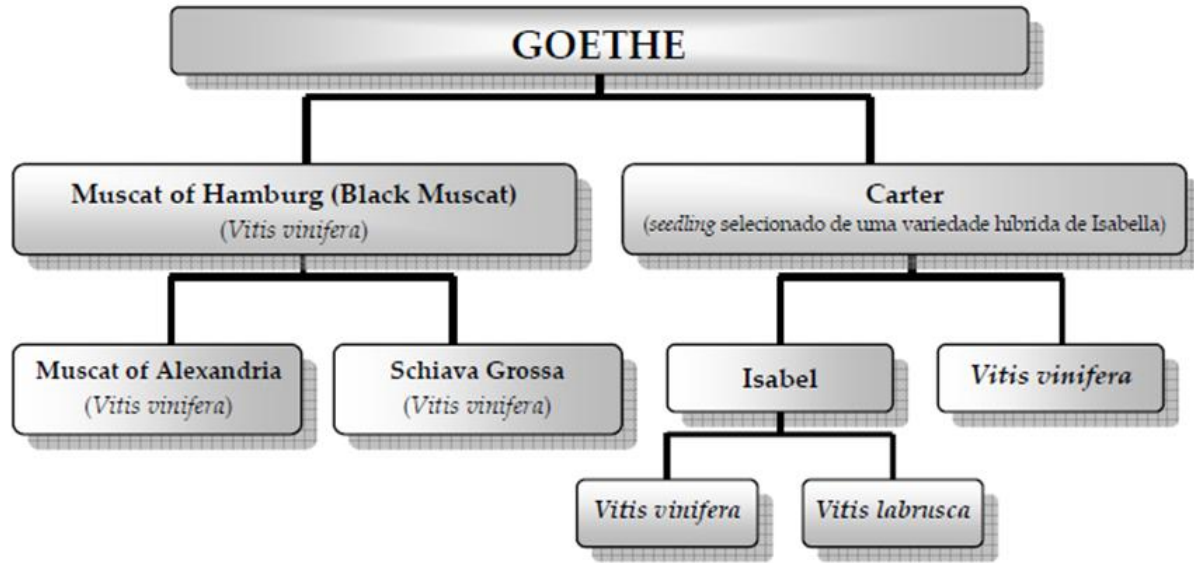


Figure 1. Genealogy of Goethe grape. Source: Velloso, 2008.

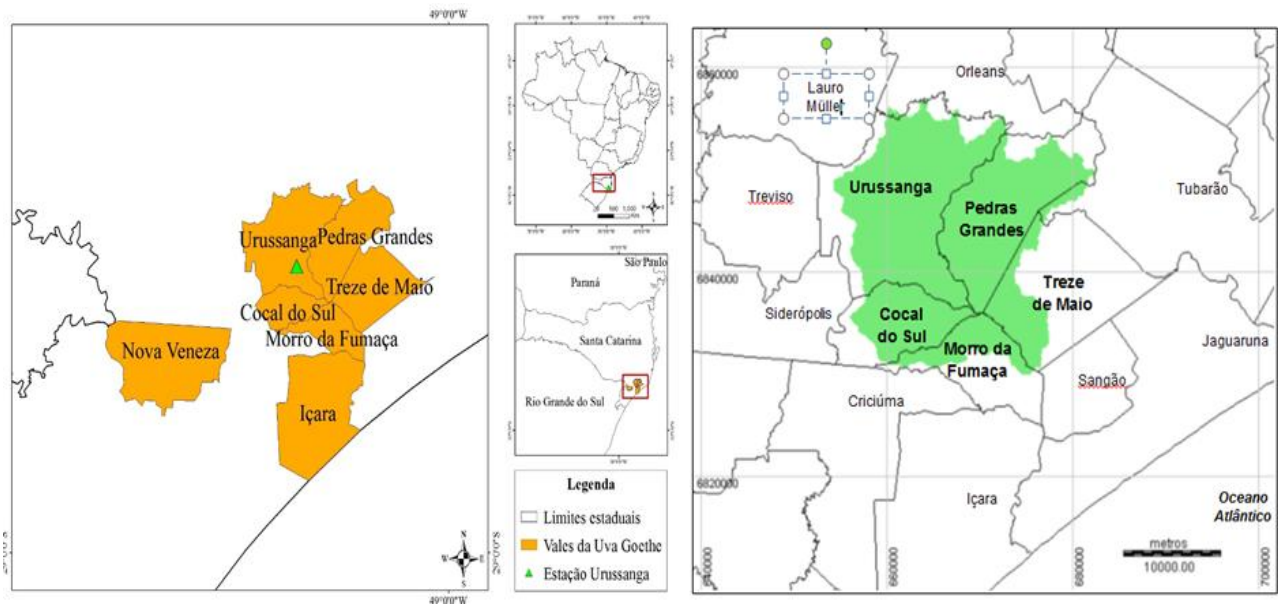


Figure 2. Delimitation of Goethe Grape Valley area. Fonte: Silva (2011) e Vieira, Garcia e Bruch (2013).

they depart in march 1878. They anchored in Brazil, more specifically in Pernambuco, and went to Rio de Janeiro in April of that year, going to Desterro in Santa Catarina State (currently Florianópolis). From Desterro to Laguna and from Laguna to Tubarão, and Pedras Grandes, they finally arrive in Urussanga, in May 26 1878. In the beginning they were 19 immigrants, and

then they were followed by other 78 families. This was how the main center of Italian colonization was created in the South of Santa Catarina state.

These immigrants brought branches of vine trees in ships from Italy. The branches were planted in the beginning of their settlement in Brazil. Nevertheless, grapevine growing and wine production were also

highlighted by challenges. Goethe variety was better adapted to soil and weather conditions of Urussanga region and in a short term was part of most of Urussanga's colony grapevines (Velloso, 2008).

Parallel to the success and development of vine culture in Urussanga, the coal industry raised and developed very fast. Within a fairly short time the nearby city of Criciúma was known as the Capital of Coal. The mineral became recognized in national economy when, after a determination from the Federal Government of Getúlio Vargas, the use of national coal became mandatory. With an attractive offer supply and advantages such as early retirement and high remuneration, the coal industry, in addition to explore coal, also changes the agricultural scenario in this region. Given this scenario, Flores and Flores (2012, p. 74) shows that wine producers given up the vineyards and became coal explorers.

However, Goethe grape growing and wine production, albeit timidly, remain in the region of Urussanga. The producers, migrant descendants, grow and produce Goethe wine rather than the grape itself. In addition, they keep the know-how, the specificity of the Goethe variety, which has so well adapted to the region.

In 2005, united by association, PROGOETHE, Goethe wine producers and grape growers, begin the process of "Goethe Grape Valley Indication of Origin", aiming to improve the product in quality, acknowledgement and, most of all, to perpetuate the product that reflects the history of their people and culture, as Flores and Flores (2012) mentioned, turned Goethe grape into a symbol of resistance and gave to their people the strength to make them keep producing grape and wine and resisting the work in charcoals.

GOETHE GRAPE VALLEY indication of origin will add a parameter to the production, organization and commerce of wines in Brazil. These products constitute the class of Brazilian Wines with Recognized Origin. It was the first IO in Brazil, not only in territorial production, but also of a wine which is produced for over a century in the area of influence of the IO with a variety exclusively present in the region of Urussanga and nearby municipalities, named Goethe Grape Valley territory. (Manual de controle interno da I.P.V.U.G. 2012. p.3).

The associates, by means of the achievement of GI registration, aimed at the perpetuation of culture and savoir-faire, the return of wines produced from Goethe grapes to wine market and recognition in national market, such as in the 1950s, in the age of Getulio Vargas, when the official wine of Brazilian Government was produced in Urussanga. After this action, the associates wished regional economic development by providing new job opportunities in production or to attend the demand of wine tourism. According to Vieira and Bruch (2012) with the process of Indication of

Origin, the formation of a cycle is observed, where different sectors become linked and depend on each other and generate benefits to the community.

DATA PRESENTATION AND ANALYSIS

After the interview, there was an attempt to check how knowledge creation was observed, as well as the acquisition of new competences when this study was held. The transcription of these interviews was divided into categories in order to ease the understanding of the outcomes. The evaluation of these categories was based on concepts stated by the authors referred in the theoretical foundations. The survey evaluates questions and answers made to the interviewees and also recognizes, by means of the answers, the existence or not of knowledge creation and acquisition of new competences in this association through techniques raised in literature, based on the concepts of Nonaka and Takeuchi (1997). The analyses can be seen below and present the outcomes collected individually in each category described:

These results are detailed and discussed below and are distributed into seven categories.

a) **Category 1:** Increase in the knowledge base of an individual.

It was found that tacit knowledge was eminent to the Chairman of Progoethe and to the wine producer, when they claim that the wine was empirically produced, since "each producer has a recipe, so everything was empirically made and the wine producers have their own recipes and their own production method". The truth is that each associated should have a recipe which is scientifically produced. Nowadays, they are partially able to produce wine in a standardized way. The standards were established by the Wine Growing Manual, made by IPVUG Regulatory Board. This knowledge base was built during many meetings that happened in IPVUG implementation process, which occurred after the application of knowledge creation processes: (1) socialization during the meetings; (2) externalization – when they showed their data and information through documents; (3) combination during the analysis and creation of the manual; and (4) internalization, when wine producers take knowledge created in geographical indication to day-by-day experience.

In interviewed people's perception, it was observed that people acquired new knowledge, that is, learned something new from the implementation of the indication of origin. The interviewed state that activities and processes were empirically made based on the family knowledge handed from generation to generation.

b) **Category 2:** Use of socialization for transferring knowledge to other associates.

Socialization comprises formal and informal conversation through information spreading, increasing wine producers' tacit knowledge base.

According to the interviews, the authors noticed that the knowledge created within the association among people was transferred as following:

1. In trips and contacts with wine, cheese and ham producers from regions with different characteristics; trips and meetings with tinned food producers, in order to know the way they function;
2. Tasting meetings, lectures and seminars;

Spreading information to people, mentioning the need of suiting the quality of wines to Ministry of Agriculture, Livestock and Food Supply's regulations (Mapa, 2011). The use of socialization with the objective of disseminating the knowledge created by indication of origin became evident when the interviewed stated that the information was sent through meetings with key people in order to show them the need to suit the product (Goethe wine) according to consumer's taste and to Mapa's regulations. Nonaka and Takeuchi (1997) state that it is necessary to use socialization in order to release knowledge and transfer it to people. In this sense, Santiago (2004) supports the affirmation that disseminating knowledge of an individual promotes face-to-face contacts and informal conversations. Choo (2003) reinforces this concept when supports that interaction in direct conversations between people of different areas, which share capacities and experiences, end to organize teams that develop with a common goal. The author agrees with the statement from Vick et al. (2009). They claim that knowledge transfer among people can happen when promoting formal and informal meetings so that the team realizes organizational and environmental variables.

c) **Category 3:** Interactive diffusion of knowledge among different levels in Progoethe.

Progoethe (association of grape and Goethe wine) applied the process of knowledge creation in these situations: 1) Socialization: during the meetings with Goethe grape producers; in tasting meetings, lectures and seminars; 2) Externalization – when they elaborate the User Manual made by IPVUG Regulatory Board; 3) Combination: during the review of the Wine Growing Manual established by members of the IPVUG Regulatory Board; and 4) Internalization: when wine producers assimilate the knowledge created and internalize it in their day by day routine in wine production.

The interviewed stated that new knowledge related to the process of Indication of Origin was disseminated

among Progoethe associates by means of tasting meetings, lectures, assistance of EPAGRI, consultancy made by a company indicated by MAPA, among other actions. IPVUG process was forwarded to Progoethe associates through the following means:

1. Many meetings;
2. Meetings with wine tasting;
3. Implementation of the User Manual, explaining the procedures applied for each activity; and
4. Meetings with the objective of reviewing procedures.

d) **Category 4:** Restructuration by creating and changing new routines

In this category the changing of new routines occurred when wine producers changed the way the wine is prepared, when they are not sure of a good quality Goethe wine, before the change, was extremely yellow, bitter or acid. Aiming the creation and the changing of routines to be performed, it was applied the following processes of knowledge creation: (1) Socialization: when there is a debate on how to structure the Wine Production User Manual; and (2) Externalization: when the Regulatory Board registers the tacit knowledge in growing standards in order to ensure the quality of the wine.

The interview pointed out that there were creation and changing of routines and activities. The change occurred due to the creation and changing the procedures performed by the members of the Regulatory Board, so that they get to a consensus about the minimum understanding of what quality means. Even so, it has still some wines with different features if compared to other Goethe wines and if compared to what is proposed by the IPVUG User Manual. When the changing of information and comparison of products began, it was started the process of search for new methods to change the product. However, there have not alterations in the final product, which kept the familiar, traditional features that are typical of Goethe wine.

e) **Category 5:** Increase in the variety of requirements

The process of knowledge creation identified in this category was: (1) Externalization, when the winegrower creates a new structure of control and makes records in documents of traceability; (2) Combination, when the winegrower records all the process since the property (grape production) until the vineyard (wine production), in order to show the traceability of the product.

The chairman of Progoethe stated that there was an increase in new items or kinds of control for the wine producers. This need is due to the adequacy of the Ministry of Agriculture legislation to Progoethe's needs.

f) **Category 6:** Consultations in publications, institutions

and entities, scientific and technical material.

Knowledge creation can occur through consultations in publications, institutions and entities, scientific and technical material. The increase in the wine producers' tacit knowledge base happened by means of SEBRAE and then by Epagri and EMBRAPA grape and wine, as well as through contact with people from the sector, mainly with biotechnology industries.

The process of knowledge creation identified in this category is: (1) Internalization: occurs when assimilating the information by means of seminars and lectures in Sebrae and Epagri and EMBRAPA grape and wine; and (2) Socialization: when disseminating information with winegrowers and wine producers.

g) Category 7: Relevance and efficacy of knowledge about Indication of Origin to Progoethe

According to Choo (2003), knowledge creation happens when the organization gives relevance and efficacy of knowledge on geographical indication. In this category, it was attempted to check if the knowledge created in the association are meaningful, recognized, important and useful to the associated with relation to new information and knowledge about geographical indication.

The processes of knowledge creation identified in this category are the following:

(1) Socialization: when winegrowers and wine producers disseminate existing knowledge to other producers by means of association meetings; (2) Combination: when the associates know the information from the Goethe Grape Wine Growing Manual; (3) Internalization: from the analysis of the Wine Growing Manual; the associates embody knowledge in order to achieve the desired outcome through the knowledge transparency created by IPVUG's process.

The authors also identified that the knowledge related to indication of origin was within wine producers' (tacit) knowledge, which is identified when they claimed that Goethe Grape wines have good quality and characteristics of the region, however, they had very diverse patterns.

h) Category 8: Increased skill and competencies with indication of origin in Progoethe.

To Boog et al (2002), training has been used as a tool for improving and adding new knowledge, skills and attitudes that it is a set of characteristics when combined, bring competitive advantage for organizations. Along the same line Gavioli (2011) states that in addition to skills, you must have domain of ethical values and their own area of expertise technical accuracy, besides being updated with the best market

practices. And above all, requires individuals who are able to mobilize the knowledge through their professional experience and their capacity for abstraction.

When the interview was pointed out that creating and modifying routines and activity, this was done due to the creation and amendment procedures performed by members of the Regulatory Council to reach a least a minimum standard consensus understanding concerning quality. The creation and modification of routines and activities occurred through various meetings between producers and occurred through SEBRAE consultant with support from Epagri, as well as through contact with people of this sector, especially biotechnology industry, which provided yeast for wine elaboration.

It appears that skills and competences increase occurred when the exchanging information and comparing products began, after the process of searching for new methods to change the product, but without causing any changes in the final product, not to lose the characteristic the familiar and traditional product, the typicality of Goethe wine.

New knowledge was acquired when Owner's Manual was developed and implemented, and adopted by winemakers to produce Goethe wine, that were met minimum standards of quality wine.

Conclusion

Despite Progoethe associates do not know the methodological concepts disseminated by Nonaka and Takeuchi (1997) in the theoretical foundations presented in this study, the authors observed that the association recognizes knowledge creation when wine producers stated that there was an increase in tacit knowledge in workers from wine growing and wine production. Socialization was observed when they stated that many meetings and information exchanges were made with the objective of implementation of the process of Goethe Grape Valley Indication of Origin, as well as that there was an increase in routines and new procedures in processes, based on changes implemented by Regulation Council concerning Owners' Manual.

The authors observed that knowledge creation from Progoethe associated increased when SEBRAE (Brazilian Micro and Small Company Support Service) and EPAGRI (Santa Catarina Rural Extension and Agricultural Research Enterprise), participated on the process of elaboration of the request made by IPVUG to INPI, so that can make the User Manual and increase the variety of requirements in the wine growing manual and improving the competence of people involved in the implementation process of IPVUG, as supported by Nonaka and Takeuchi (1997).

The finding that there was increased technical knowledge of members of Progoethe can be verified in the interviews, when the producers interviewed state that their knowledge-sharing was made among associated from the moment of request the registration of IPVUG in INPI (National Institute of Industrial Property). The consolidation among the concepts raised in the theoretical foundation on knowledge creation and development of new skills can be checked in interviews that occurred during follow-up research visits and studies conducted by researchers through the responses obtained during the interviews, which were structured and based on the concepts elaborated by authors searched the literature and presented in this study.

The authors verified that acquiring IPVUG registration brought an increase in competences to Goethe grape Valley wine producers in Urussanga, Santa Catarina, Brazil, after they started to follow new rules and regulations of Owners' Manual, established in order to producers have right of using the seal that guarantees the product. From these rules, producers should inform the Regulation Council (RC), once productivity should provide productive balance to the vineyard and value the quality of grapes and products elaborated in the property, the maximum income per hectare of each property is determined. A technician estimates the production by counting bunches of grapes based on an updated register and receives the information from production's traceability. With respect to chemical characteristics, producers should attend Brazilian regulations of quality and identity of wine. Thus, products will receive IPVUG seal of quality when comply all RC regulations disposed on Owners' Manual.

Another factor showed that new competences, after starting information Exchange and product comparison in the search for the best wine production process did not change final product and maintained the status of typical and traditional products. Products still have a differentiated quality, are familiar and traditional.

From these results, the authors conclude that geographical indication created knowledge during production process and increased wine makers' competence level. They also realized that from the implementation of IPVUG addressed to an efficient management in winery properties, because they control production volume, trace the place, volume and properties where grapes were harvested. IPVUG also provided a better cost control, and consequently adopt more efficient strategies of wine production and distribution.

And from these management changes, with greater knowledge of their actions, the winemakers have started to notice an increase in selling their products than 20% of wines and 30% of sparkling wines made from the grape Goethe. Still, given the record of IPVUG,

the region has already received more tourists to know the Italian culture, the history of the region, historical heritage and, above all, the Goethe wine produced.

Thus, the authors suggest that further studies are conducted in the sense of deepen the understanding of IPVUG in many fields. Another opportunity to better understand this process would be identifying and analyzing the diverse organizational cultures that foster, facilitate or complicate knowledge creation with the use of IPVUG by means of some questions, such as: (1) Which kind of organizational cultures are most favorable to the implementation of a geographical indication? (2) The culture of Family organizations facilitates or complicates the creation of knowledge in the implementation of the recognition process of a geographical indication?

Conflict of Interests

The authors have not declared any conflict of interest.

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