

## A SOCIAL APPROACH FOR THE CONCEPT OF KNOWLEDGE GATEKEEPERS: THE CASE OF THE AMERICAN COMMUNITY COLLEGES

### UMA ABORDAGEM SOCIAL PARA O CONCEITO DE GUARDIÕES DO CONHECIMENTO: O CASO DAS UNIVERSIDADES COMUNITÁRIAS AMERICANAS

Ana Cristina Fachinelli – Universidade de Caxias do Sul - [afachinelli@gmail.com](mailto:afachinelli@gmail.com)

Janaína Macke – Universidade de Caxias do Sul - [jmacke@terra.com.br](mailto:jmacke@terra.com.br)

Jason Rickenberg – Northwest State Community College, Archbold, Ohio, USA -  
[jrickenberg@northweststate.edu](mailto:jrickenberg@northweststate.edu)

Lucas Fachinelli – Universidade de Caxias do Sul - [fachibr@hotmail.com](mailto:fachibr@hotmail.com)

#### Resumo

Este artigo tem como objetivo ampliar o conceito de guardiões do conhecimento (*knowledge gatekeeper*) a partir de seu papel como um agente que pode proporcionar o acesso ao conhecimento heterogêneo e complementar num determinado ambiente social. Esta é uma pesquisa exploratória focada no estudo sobre a relação entre capital social e a noção de guardiões do conhecimento na perspectiva das universidades comunitárias norte-americanas. A hipótese levantada por este estudo é que de acordo com o contexto o conceito de guardião do conhecimento pode ser expandido e além disso, o contexto define a sua relevância para o desenvolvimento do entorno.

**Palavras-chave:** Guardiões do Conhecimento, Capital Social, Proximidade Social, Universidades Comunitárias.

#### Abstract

This article aims to expand the concept of knowledge gatekeepers from his role as an agent that can provide the access to heterogeneous and complementary knowledge to a particular social environment. This is an exploratory research focused on the study about the relationship between social capital and the notion of the knowledge gatekeeper in the case of the American community colleges. The hypothesis raised by this study is, according to the context, the concept of knowledge gatekeeper can be expanded. Besides allowing the expansion of the concept, the context defines the relevance of a knowledge gatekeeper for the development of its surroundings.

**Key-words:** Knowledge Gatekeeper, Social Capital, Social Proximity, Community Colleges.

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## INTRODUCTION

The purpose of this study is to analyze the role of American community colleges as knowledge gatekeepers in their local communities. The first studies about knowledge gatekeepers show the effects that they have on the diffusion of knowledge within an economic system and on the local organizations. In fact, the knowledge gatekeepers function as facilitators to access the complementary and heterogeneous knowledge.

Studies have identified that one of the main characteristics of knowledge gatekeepers is that they possess a high level of social capital followed by a networks' centrality. Therefore, the relevance of the social capital, for the understanding of the community colleges as knowledge gatekeepers, lays on their bond with cultural and social-economics within their surrounding environment.

According to the American association of Community Colleges (2009), more than 43% of Afro-American and 52% of Hispanic students graduating have studied some part of their education on a community college. These students are generally older, and poorer than students who attended universities. This actual characteristic supports the original concept of community colleges, which is to be of service to the local communities in one specific region. The community colleges were created on 1946 by recommendation of the President's Commission on Higher Education. In the beginning, community colleges were created by local councils or by groups of people concerned about education and local development.

The main finality was to offer quality higher education to the youth of the local community. During the 1960s and 1970s, community college enrollment was increased due to the feminist movement, civil rights groups, and the return of the veterans of the Vietnam war there was a huge increase in the subscriptions of these institutions. Thus in this work we aim to follow a social approach for the concept of knowledge gatekeeper from the case study of the community colleges.

## 2. KNOWLEDGE GATEKEEPERS, CONCEPTUAL APPROACH

The concept of knowledge gatekeeper started in the late 1970s to define individuals with a high degree of knowledge from which other would seek for information. The differential of these people is the high degree of connectivity to the information sources outside their organizations (Allen, 1977).

A small number of key people to whom others frequently turned for information. These people differ from their colleagues in the degree to which they exposed themselves to sources of technological knowledge outside their organization. Their features are such as they constitute a small community of individuals, they are at the core of an information network, they are overexposed to external sources of information, and the linkages they develop with external actors are more informal. (Allen, p.145)

In the 1980s, Tushman and Katz (1980) studied the role of individuals acting as knowledge gatekeeper, and the performance of project groups. In the 1990s, the network theory gains strength as hybrid organizational structures constituted by nodes, which streamlines and facilitates the absorption, and mobilization of data, information, and knowledge (Cohen & Levintal, 1990; Williamson, 1996; McEvily & Zaheer). By the network theory point of view, the knowledge gatekeeper is a focal point for the innovation capability of the network because it possesses a great capability of interacting, with the other network nodes, collect, and disseminate knowledge (Petruzzelli, 2008; Tushman, 1997; Hagardon, 1998).

In the 2000, the notion of knowledge gatekeeper becomes wider and receives concepts from the knowledge for innovation. “An important role in the innovation processes and new knowledge creation is assumed by actors, generally known as knowledge gatekeepers that can act as “bridges”, providing the access to complementary and heterogeneous knowledge” (Petruzzelli, Albino, Carbonara, & Rotolo, 2010). In the context, the knowledge gatekeeper is characterized by the high degree of absorptive capacity, it means abilities to absorb, understand and exploit external knowledge (Cohen & Levintal, 1990); strong social capital presence, “an essential precondition for knowledge exchange and collective learning” (Boschma & ter Wal, 2007) and strongly connected with external knowledge sources (Boschma & ter Wal, 2007; Petruzzelli, Albino, Carbonara, & Rotolo, 2010). Besides precondition notion for the knowledge dynamics and learning, social capital principles may be seen in the concept of social proximity for the networks development (Bradshaw, 2001; Knoblen and Oerlemans, 2006) and for the interactive learning and innovation (Boschma, 2005). “Social proximity may stimulate interactive learning due to trust and commitment [...] social proximity are characterized by strong ties between partners, although different mechanisms are involved (hierarchy and trust, respectively) (Boschma, 2005, p. 67).

In addition, the social proximity also produces a particular effect on the social capital that can be characterized by the classical definition of the community which includes aspects

of activities coordinated with a certain common purpose, self-government, cultural superstructure and sense of identity (Durstun, 2000)

For Durston (1999) the community social capital is a specific version of social capital. The cultural and trust norms as well as the interpersonal networks of reciprocity are precursors of more complex institutions oriented by norms pursuing the common wellbeing. The search itself for the common wellbeing defines not only the community social capital, but it also accentuates its precursor elements such as its cultural values, trust levels, and the reciprocity present at the community level in the social system.

The community social capital, within that logic is not an individual resource but a form of social institutionality of the community. Different from formal institutions of joint assets such as cooperatives and social institutions the community social capital refers to norms, practices, and interpersonal relationships that exist and are observed within a group that does not yet have an institutional status. It is an “informal institutionality” in the interior and exterior of community organizations, or wider social systems (Durstun 1999). In this way, the community social capital may be the leverage for the knowledge exchange and collective learning in a social approach for the knowledge gatekeepers.

### **3. SOCIAL CAPITAL: DIFFERENT TYPES, DIFFERENT AIMS**

The term “social capital” appeared in the academic community with the intent to mark the importance that networks and relationships have, which are based on trust, co-operating, and collective action as a basis for the survival and functioning of neighborhoods in cities. The studies by Coleman (1988), Putnam, Leonardi, Nanetti, (1993) indicated the importance of this capital in the relationship among individuals, as well as in that of nations and are considered as an inherent resource in extended, and nuclear family relationships, and social organizations.

The social capital allows people to reach an efficacious community focus on effective joint problem solving, in other words, in democratic societies, the art of combining is the mother of all other human arts (Tocqueville, 1835). Therefore, trust and reciprocal obligation in civil society are crucial to build a knowledge gatekeeper.

In this line, the knowledge gatekeeper can provide a direct and networked way to link up small-scale groups defined by shared values trust, and reciprocal face-to-face relationships – all sources of social capital (Briggs, 2008). This dynamics only is possible through a

network relationship, in which learning takes the form of deeper knowledge of counterparts' interests. The more the network is formed by horizontal links, the more knowledge will be generated.

In sum, social capital is represented by characteristics of the social organization that can improve the efficiency of society and facilitate the coordination of actions. The authors that write about this subject have identified a number of common elements for its creation, such as social networks, trust, reciprocity, civic participation, and social norms (Nahapiet & Ghoshal, 1998; Onyx & Bullen, 2000).

Social networks are characterized by collective actions of individuals in the society (Onyx & Bullen, 2000). In order to create a network it is necessary to have spontaneous propensity in social interacting and that capacity to form new associations and to cooperate within the established referential terms (Fukuyama, 1999).

A second element that is characteristic of social capital is trust. This is considered a fundamental element for the prevision of inter and intra organizational depth (Smith, Carroll & Ashford, 1995). Currie and Stanley (2008) consider that trust is derived from the rules of reciprocity and of the systems of civic participation.

Concerning relationship building, trust between partners is considered a determinant factor for an efficient interchange of knowledge (Dirks & Ferrin, 2001; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998; Li, Barner-Rasmussen & Björkman, 2007). Fukuyama (1999) considered trust as an existing expectation in the community where honesty and cooperation are part of regular behavior, which is based on established norms accepted by all.

Another element of social capital is reciprocity. By reciprocity, Onyx and Bullen (2000) understand an action of providing services for the benefit of others with the expectation that this action will grant the performer a future benefit in return. Coleman (1988) sees reciprocity as the retribution for a favor.

The civic participation for Coleman (1988) is seen as an action in association of different types. Putnam, et al (1993) conclude that a civic community is characterized by acting citizen engaged and involved in the public spirit by egalitarian political relationships in a social structure strengthened by trust and cooperation.

Characteristics of a civic community are: a group of citizens, which implies equal rights and obligations for all individuals, a unified community, for an important part moved by the horizontal relationships of reciprocity and cooperation, while the vertical relationships

of authority and dependence are hardly present; the perception of responsibility among the leaders; the existence of wide participation by the citizens in government; the importance given to public spirit by the citizens in general; trust among the members of that society (Putnam et al 1993).

The main functions of social capital are also known as types of social capital: bridging, bonding and linking (Halpern, 2005; Onyx & Bullen, 2000; Sabatini, 2008).

The bonding social capital involves links between agents in the same position, within homogeneous groups (Monastério, 2002). This type of social capital - called by Putnam et al. (1993) the sociological superglue - refers to the strong ties, since the power of a social connection is defined as a combination of time, emotional intensity, intimacy and reciprocal services. Circles of family, friendship or closed communities are typical of these strong ties (Granovetter, 1985).

In this sense, the bonding social capital is characterized by strong relations of mutual aid in the local context and high levels of participation, which results in dense multi-functional strong ties but localized trust. This type of social capital is characterized to occur among people in some way “likely” - it generates empowerment within horizontal networks (Onyx & Bullen, 2000; Macke et al., 2010).

However, this mutual support can be limited to people who are inserted into the network and cannot be extended to other networks or groups. Moreover, the bridging social capital is developed between different groups of actors and serves to expand the skills and networks resources, that is not accessible in other ways (Sabatini, 2008).

The bridging type is the form of social capital that refers to the weak ties (Granovetter, 1985), because it takes place among agents of distinct social groups, facilitating access to various sources of information. The weak ties connections add value to each actor by providing different information sources.

The linking social capital considers relations of unequal power and usually refers to connections between the poor people and those in command positions in formal organizations. It is present in vertical relationships of control and power (Grootaert et al., 2004). In communities where there is a stock of this kind of social capital, the governments are more responsive to the demands coming from the lower strata of the social pyramid (Woolcock, 2001).

Of course, the three types of social capital described above are not mutually exclusive, ie, the presence of one, not necessarily exclude the presence of the another (Onyx & Bullen, 2000). And besides, a civic community needs these three types of social capital to develop itself.

This exploratory research focus on the study about the relationship between social capital and the notion of the knowledge gatekeeper in the case of the American community colleges. We aim to expand the concept of knowledge gatekeeper from his role as an agent that can provide the access to heterogeneous and complementary knowledge to a particular social environment, in this case a civic community.

A major strength of community social capital is the central role of the moral dimension in the construction of a "good society" (in the words of Putnam, a civic community). Moreover, there is an emphasis on citizen participation in collective affairs, the rescue of the role of family and schools to civic education, the quest for balance between rights and responsibilities and the recognition of cultural diversity, without compromising the identity of groups and communities (Etzioni, 2003; Schmidt, 2010).

Presented in this way, community social capital is an alternative path between excessive regulation of state and market; for communitarians, the values of solidarity, reciprocity, and community ties will prevail, naturally, upon market forces and the logic of policy. In this sense, the virtues of responsibility of the collaboration norms of reciprocity and altruism may build a civic community (Fachinelli, Macke, Zorzi, 2010).

#### **4. HISTORY OF THE AMERICAN COMMUNITY COLLEGE**

The concept of community college is a more recent conception, taking its' roots at Central High School, in Joliet Illinois in 1901 (Jurgens, 2010). The original concepts of community college was to add two additional years to the pre-existing High School curriculum, in order to offer technical training, or liberal arts education, with the underlying goal of matriculation at a four-year institution (Jurgens, 2010). According to Jill Jurgens, enrollment for these earliest community colleges were at around 150-200 students (Jurgens, 2010) The American Community College module has made several changes since inception in the early 1900's.

The concept of open admission has always benefitted those students who have been historically underserved. The open admissions process has allow all students the opportunity

of becoming community college students. According to Jurgens (2010) “unique characteristics of these early community colleges was their ease of access to women. This feature was attributed to the major role college played in preparing grammar school teachers.” During the early years, four-year colleges initiated programs to help students prepare for college. These programs allowed students to earn a junior college certificates and credit. The first example of this program was started by the University of California Berkeley (Jurgens, 2010). The start of this certificate program and credit programs allowed students to apply their credit obtained at their local college, or extended high school program to matriculate as college credit at the four-year institution (Jurgens, 2010). During this same time, early transfer initiatives came forth in order to make transferring credits seamless. Jurgens (2010) states, “One of the most influential of these early groups was the Committee of Ten, which initiated the adoption of the Carnegie unit that led to formulas for credit transfer.” By the end of 1926, there were 74 community colleges in the United States (American Association for Community Colleges, 2006).

As the American community college became more prevalent, there also became a need for an educated labor force. The community college stepped up to meet the challenge. Jurgens, (2010) states, “During the Great Depression of the 1930s, a trend toward job training took root. In order to reduce widespread unemployment, community colleges began to provide job-training programs. This job training focus continued through the 1940s and 1950s.”

After World War 2, there was legislation passed to help those who had served in the armed forces. One important boost to community colleges was the establishment of the G.I. Bill in 1944. Jurgens, (2010) informs us, “Following WWII, there was a shortage of skilled workers. In 1944, the G.I. Bill of Rights was passed. This Bill provided more educational opportunities to veterans, which lead to increased enrollments. Furthermore, “In 1947, The Truman Commission Report, also know as the “Higher Education for an American Democracy” report, set the stage for greater efforts to establish junior colleges as genuine academic institutions” (Jurgens, 2010). The other important part of the Truman report was to, “establish a network of public community colleges, which would combine the finest vocational and technical education with the more conventional junior college education to benefit local economies. The objective was to open higher education for little or no tuition, to a diverse group of students, including women and ethnic minorities, while serving the



community needs” (Jurgens, 2010). During this period, the community college started to transition into the current model.

There was yet more change that would take place in the 1950s, which would lead to significant progress within the community college model. According to Jurgens (2010), “In 1957 a national committee was formed by the Association of American Colleges and the American Association of Junior Colleges. In 1958, the American Association of Collegiate Registrars and Admissions Officers joined these associations and the Joint Committee on Junior and Senior Colleges was formed.” Enrollment in community colleges the 1960’s grew very rapidly.

The community colleges witnessed a huge boost in enrollment in the 1960s. There are several factors such as the feminist movement. The boost in enrollment can also be explained by, “growth in the number of community colleges and in enrollments has been attributed to three factors: “baby boomers” reaching college age, more parents desiring postsecondary education for their children, and individuals seeking deferment from the draft during the Vietnam War” (Jurgens, 2010). It was not until the 1970s and 1980 until community colleges embraced the idea of workforce development.

Janice Friedel, (2010) discusses the impact of workforce development within the community college model, “Community colleges were built on the foundation that emerged from the integration of junior colleges with vocational institutions. As the 1980s approached and the majority of these institutions entered their third decade, the nation adjusted to the radical shift from a manufacturing driven economy to a service and informational driven economy. As state legislatures developed policy to create and retain employers, community colleges became the primary tool for economic and workforce development.” While there was an emergence of a new workforce development model within the community college setting, the relationships between state and local governments grew stronger.

## **5. The community college of today**

Presently, community colleges have transformed from the traditional two-year associates degree-granting institutions to much more. There are several tracts for students who wish to attend community college; in fact, the opportunities start while students are still in high school. Community colleges offer high school students the opportunity to attend college classes, even while the students stay enrolled in high school. This program may be referred to

as dual enrolment, early admit, or post secondary enrolment option, but are similar depending on the geographical location.

The purpose of these dual enrolment programs has been to allow high school students the opportunity to take colleges level classes while they are still in high school. These programs allow students to take course work, in order to apply to an associate's degree or towards a bachelor's degree program at other accredited institutions. These dual enrolment programs have been taking place since the early 1990's (Ohio Board of Regents, 2011). Presently there are anywhere between 5% to 20% of high school students who are enrolled in community college classes, nationwide (U.S. Department of Labor, Bureau of Labor Statistics, 2003).

Currently, community colleges offer several opportunities for enrolling students ranging from one-year certificates in technical programs, or two-year associate degrees degrees. According to Jill Jurgens (2010), "The popularity of these certificates is evident in the increased number of certificates being developed and awarded at community colleges. These certificate programs allow individuals to obtain training in a relatively short amount of time in order to quickly enter the workforces." As the number of certificate programs has increased so, have the number of associate's degree.

The community college has been a champion in allowing access to those students who are less likely to obtain a college education based upon socio-economic variables. The core benefit of community colleges is allowing the underserved population the same opportunities as those attending four-year public and private institutions. In 2008, the National Commission on Community Colleges (2008) reported that there are more than 800,000 associates degrees and certificates awarded annually. The most impressive number is that nearly 80% of all police officers, fire fighters and other first responders have received certification from community colleges (National Commission on Community Colleges, 2008). In addition, there are another 50% of all health-care workers and nurses have received their training and education at community colleges (National Commission on Community Colleges, 2008).

The number of students attending community colleges has dramatically increased since the concept originated at Central High School, in Joliet Illinois in 1901 (Jurgens, 2010). Today's community college influence can be best exemplified by Jurgens (2010) findings, "Today the influence of the community college system in our society is astounding with 46% of the nation's undergraduates attending community college. The community college boom has stabilized in recent years; however, the enrollment continues to grow at a faster rate that that of 4-year institutions. The American Association of Community Colleges, (2006)

indicates that there are approximately 11.6 million students enrolled in community colleges nation wide.

The community social capital is also evident in the management of the community colleges. They have a board denominated “Lay board of trustees” made up by citizens from the community. They are people concerned about matters of education. The Lay board of trustees protects the colleges from potential damaging influence of local politics and the volatility of interests on the political game.

## 6. DISCUSSION

The benefits of the community college are easy to calculate. Patrick Sullivan (2010) summarizes his finding stating, “The social and fiscal benefits that community colleges bring to the local, state, and national economies have long been the province of anecdote, conjecture, and debate, but important new work has taken much mystery and guesswork out of this question.” While some may agree that education benefits both the individual and economy, Sullivan can support this premise through his research. Within his research, Sullivan (2010) correlates the annual income received by individuals based upon their education. Fore example, Sullivan (2010) finds that on average individual received approximately \$31, 500 for a high school education, compared to \$40,000 for an associates degree. Sullivan (2010) takes the data further by calculating the amount of taxes each individual pays per year based on education. The author finds that an individual with a high school education pays roughly \$6,600 per year compared to \$8,100 per year for an individual who obtains an associated degree (Sullivan, 2010). The author also correlates other variables that a community colleges education offer by stating, “students with an associate’s degree or with “some college no degree” have higher life earnings, pay more local, state and federal taxes, are more likely to have health insurance, are more likely to be involved with civic activities, are more likely to vote and exercise, are less likely to be unemployed, are less likely to be poor, and are less likely to smoke than students with just a high school diploma” (Sullivan, 2010). The community college is a institution that benefits the underserved.

The community college provides education to those individual who might not have traditionally attended a four-year college or university. Because of this opportunity, The American Association of Community Colleges (2009) has found that 40% of all first time freshman students, 43% of all Black undergraduate students, 52% of all Hispanic students, 45% of Asian/Pacific islander students, and 52% of all Native American students attend

community colleges. These numbers show the importance that community college brings to those students who have been historically marginalizes and financially deprived. Therefore, due to low tuition rates and an open admission policy, community colleges are serving those who historically have been the most in need.

## 7. CONCLUSION

Even considering that is possible to construct effective forms of civic capacity, we know from both experience and literature that building social capital is not something easy (Putnam, 1993). For a knowledge gatekeeper be on the “right way” there are some questions to observe. First, the gatekeeper has to create strategies to enhance community wide collective action, because this will generate an ongoing learning process and, consequently, a broader and powerful conception of democracy. Second, these strategies should answer the different and even opposite expectations of civil society agents. And finally, projects should emerge from the society, because trust and commitment only occur when people are involved as co-producers of change.

Through the approaches discussed in this study, we can see how the concept of social capital is linked to the concept of knowledge gatekeepers. The enhancement of relations and social structures, as well as the need to develop concepts that reflect the complexity and interrelationships of the various spheres of human intervention, are some reasons for future research in this field.

The social capital concept, in general way, is defined through the resources inherent to social relations - such as trust, reciprocity, norms, participation and cooperation - that facilitate collective action focused in a common purpose, or that allow to obtain certain economic, political or social aims.

Therefore, when trust is present, there is expansion of horizontal contacts. In addition, in an environment where there is a greater presence of social capital is possible that the opportunities for developing knowledge gatekeepers be better utilized.

In this study, the community colleges can be considered as knowledge gatekeepers, because they provide the opportunities for access to education and knowledge - especially for individuals who probably would not have another chance, except through a community college.

Thus, if the interactions between agents are a key element of exchange mechanism, the characteristics that are present in the interaction (specially the social capital) are crucial to the knowledge gatekeeper. And, most important, independently of the duration or the objectives of these exchanges, a legitimized knowledge gatekeeper can be considered one of the main assets a society has to develop its potential.

In addition to the relationships of trust and horizontally, the community colleges constitute effective learning environments by providing spaces and moments of socialization of knowledge, access to external expertise and new knowledge - conditions that justify the hypothesis raised by this study – that according to the context, the concept of knowledge gatekeeper can be expanded. Besides allowing the expansion of the concept, the context defines the relevance and legitimacy of a knowledge gatekeeper for the development of its surroundings. Therefore, a knowledge gatekeeper can become more successful when investing in two key elements that are: culture and people (relationships), since these elements are the basis for maintaining and/or strengthening social capital (specially the bridging).

We can conclude that the stock of social capital of a knowledge gatekeeper facilitates access - for individuals, companies, public and non-governmental agents - to opportunities and initiatives for joint action. In other words, the social capital can be considered the basic resource for the main feature of a knowledge gatekeeper: the knowledge.

## 8. REFERENCES

- ALLEN, Thomas. Managing the Flow of Technology. Cambridge, MA: The MIT Press, 1977.
- American Association of Community Colleges. Historical Information. 2006. Retrieved from: <http://www.aacc.nche.edu/AboutCC/history/Pages/pasttopresent.aspx>, visited 7 September 2011.
- American Association of Community Colleges. Fast Facts, 2009. Retrieved from <http://www.aacc.nche.edu?AboutCC/Pages.fastfacts.aspx>, 7 September 2011.
- BOSCHMA, Ron A. Proximity and innovation: A critical assessment. *Regional Studies* (39), pp. 61-74, 2005.
- BOSCHMA, R. A.; TER WAL, A. L. Knowledge networks and innovative performance in an industrial district: The case of a footwear district in the South of Italy. *Industry & Innovation* (14), pp. 177-99, 2007.
- BRADSHAW, Matt. Multiple proximities: culture and geography in the transport logistics of newsprint manufactured in Australia. *Environment and Planning* (33), pp. 1717-1739, 2001.

- BRIGGS, Xavier S. Democracy as a Problem Solving: civic capacity in communities across the globe. Cambridge: MIT Press, 2008.
- COHEN, W. M.; LEVINTAL, D. A. Absorptive capacity: a new perspective on learning and innovation. *Administrative Science Quarterly* (35), pp. 128-152, 1990.
- COLEMAN, James S. Social Capital in the creation of Human Capital. *American Journal of Sociology*, 94, 95-120, 1988.
- CURRIE, G.; STANLEY, J. Investigating links between social capital and public transport. *Transport Reviews*, 28(4), 529–547, 2008.
- DIRKS, K. T.; FERRIN, D. L. The role of trust in organizational settings. *Organization Science*, 12(4), 450–467, 2001.
- DURSTON, John. ¿Qué es el capital social comunitario?. Santiago de Chile: Naciones Unidas, 2001.
- DURSTON, John. Construyendo Capital Social Comunitario: una experiencia de empoderamiento rural en Guatemala. Santiago de Chile: Naciones Unidas, 1999.
- ETZIONI, Amitai. Communitarianism. K. Christensen, & D. Levinson (Eds.), *Encyclopedia of community: from the village to the virtual world* (pp. 224-228). Thousand Oaks, CA: Sage Publications, 2003.
- FACHINELLI, A. C.; MACKE, J.; ZORZI, I. The Importance of the Community Supported University for the development of an Emerging Knowledge City: a Brazilian case. Third Knowledge Cities World Summit, Melbourne, 2010.
- FRIEDEL, Janice N. The Effect of the Community College Workforce Development on Governance. *American Educational History Journal*; Spring 2010, Vol. 37 Issue 1/2, p207-220, 14p, 2010.
- FUKUYAMA, Francis. The great disruption: human nature and the reconstitution of social order. London Profile Book, 1999.
- GRANOVETTER, Mark S. Economic Action and Social Structure: the problem of embeddedness. *American Journal of Sociology*, 91 (3), 481-510, 1985.
- GROOTAERT, C., Narayan, D., Jones, V. N. & Woolcock, M. Measuring social capital: an integrated questionnaire. Washington: World Bank Working Paper n. 18, 2004.
- HAGARDON, Andrew B. Firms as knowledge brokers: lessons in pursuing continuous innovation. *California Management Review* , pp. 209-227, 1998.
- HALPERN, David. Social Capital. Cambridge: Polity Press, 2005.
- JURGENS, Jill. C. The Evolution of Community Colleges. *College Student Affairs Journal*; Vol. 28 Issue 2, pp. 251-261, 2010.
- KNOBEN, J.; OERLEMANS, L. A. Proximity and inter-organizational collaboration: A literature review. *International Journal of Management Reviews* (8), pp. 71-89, 2006.

- LI, L.; BARNER-RASMUSSEN, W.; BJÖRKMAN, I. What Difference Does the Location Make?: A Social Capital Perspective on Transfer of Knowledge from Multinational Corporation Subsidiaries Located in China and Finland. *Asia Pacific Business Review*, 13 (2), 233–249, 2007.
- MACKE, J.; VALLEJOS, R. V.; FACCIN, K.; GENARI, D. The Impact of Inter-organizational Social Capital in Collaborative Networks Competitiveness: An Empirical Analysis. *IFIP Advances in Information and Communication Technology*, 336, 517-526. doi: 10.1007/978-3-642-15961-9\_62, 2010.
- MCEVILY, B.; ZAHEER, A. Bridging ties: a source of firm heterogeneity in competitive capabilities. *Strategic Management Journal* (20), pp. 1133-1156.
- MONASTÉRIO, Leonardo M. Capital social e a região Sul do Rio Grande do Sul. Doctoral Thesis in Economic Development, Federal University of Paraná, Curitiba, Brazil, 2002.
- NAHAPIET, J.; GHOSHAL, S. Social capital, intellectual capital and the organizational advantage. *Academy of Management Review*, 23 (2), 242 – 266, 1998.
- National Commission on Community Colleges Winning the skills race and strengthening America's middle class: A action agenda for community colleges, 2008. Retrieved from: [http://www.collegeboard.com/prod\\_downloads/prof/community/winning\\_the\\_skills\\_race\\_summary.pdf](http://www.collegeboard.com/prod_downloads/prof/community/winning_the_skills_race_summary.pdf), visited 7 September 2011.
- Ohio Board of Regents. A & T Policy – Preamble, 2011. Retrieved from: <http://www.ohiohighered.org/node/628>, visited 7 September 2011.
- ONYX, J/ BULLEN, P. Measuring Social Capital in Five Communities. *The Journal of Applied Behavioral Science*, 36 (1), 23 – 42, 2000.
- PETRUZZELLI, Antonio M. Proximity and knowledge gatekeepers: the case of the Polytechnic University of Turin. *Journal of Knowledge Management* , pp. 34-51, 2008.
- PETRUZZELLI, A. M.; ALBINO, V.; CARBONARA, N.; ROTOLO, D. Leveraging learning behaviour and network structure to improve knowledge gatekeepers' performance. *Journal of Knowledge Management* (14), pp. 635-658, 2010.
- PUTNAM, Robert D. *Bowling Alone: the collapse and revival of American community*. New York: Simon & Schuster Paperbacks, 2000.
- PUTNAM, R. D.; LEONARDI, R.; NANETTI, R.Y. *Making Democracy Work: civic traditions in modern Italy*. Princeton: Princeton University Press, 1993.
- PUTNAM, R. D.; LEONARDI, R.; NANETTI, R. Y. *Making Democracy Work: civic traditions in modern Italy*. Princeton: Princeton University Press, 1993.
- SABATINI, Fabio. Social Capital and the Quality of Economic Development. *Kyklos*, 61 (3), 466–499, 2008. doi: 10.1111/j.1467-6435.2008.00413.x
- SCHMIDT, João. P. O comunitário em tempos de público não estatal. *Avaliação*, 15, (1), 9-40, 2010.

- SMITH, K. G.; CARROLL, S. J.; ASHFORD, S. J. Intra- and interorganizational cooperation: toward a research agenda. *Academy of Management Journal*, 38 (1), 7–23, 1995.
- SULLIVAN, Patric. What is Affordable Community College Tuition?: Part II. *Community College Journal of Research and Practice*. Volume 34, Issue 9, 2010
- TOCQUEVILLE, Alexis. *De la Démocratie en Amérique*. Paris: Les Éditions Gallimard.
- TSAI, W. ; GHOSHAL, S. Social capital and value creation: The role of intrafirm networks. *Academy of Management Journal*, 41, p. 464–478, 2010.
- TUSHMAN, Michael L. Special boundary roles in the innovation process. *Administrative Science Quarterly* (22), pp. 587-605, 1997.
- U.S. Department of Labor, Bureau of Labor Statistics (Winter 2002/2003). *The Changing Role of Community College*. *Occupational Outlook Quarterly*, 46(4), 14-21, 2003.
- WILLIAMSON, Oliver. *The Mechanism of Governance*. New York: Oxford University Press, 1996.
- WOOLCOCK, Michael. La importancia del capital social para comprender los resultados económicos y sociales. Development Research Group, The World Bank, 2001.