"Search Engine Optimization (SEO) as a dynamic online promotion technique: The implications of activity theory for promotion managers"

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ARTICLE INFO	George S. Spais (2010). Search Engine Optimization (SEO) as a dynamic online promotion technique: The implications of activity theory for promotion managers. *Innovative Marketing* , *6*(1)
RELEASED ON	Thursday, 15 April 2010
JOURNAL	"Innovative Marketing "
FOUNDER	LLC "Consulting Publishing Company "Business Perspectives"

NUMBER OF REFERENCES

0

NUMBER OF FIGURES

0

NUMBER OF TABLES

0

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Search Engine Optimization (SEO) as a dynamic online promotion technique: the implications of activity theory for promotion managers

Abstract

The paper examined the possibility of an extension of Bedny's perspective of 'activity' theory as a framework for the elaboration of new online promotion channels, such as the search engines. This conceptualization was approached as a framework for Search Engine Optimization (SEO) contextual issues, which can be used to aid the design and analysis of the SEO promotion technique investigations. A critical hermeneutic approach was adopted for the present study. Our organized literature review has led us to an initial judgmental sample of fifty-five (55) published research works (selected at the first stage of the literature review), in order to be scanned and reached at one to thirty (30) published research works, which were processed to offer some valuable findings. Because of the zero research function of activity theory in the e-marketing literature and as the only refereed journal that focused on the search engine marketing themes was the *Search Engine Marketing Journal*, which was recently launched, we broadened the selection of research papers based on activity theory focusing on web mediated communication applications. Our research intention was to categorize the constructs of the following fundamental concept: "behavioristic framework for the elaboration of SEO promotion technique". The examination of the critical case of Increase Visibility Inc. gave us valuable information with regard to the potentiality of activity theory, application to modern online promotion channels, such as the SEO and, thus, the phenomenon studied became more visible. The literature review and the case study analysis findings indeed revealed very new constructs and established an initial understanding of the constructs and their relationship to other constructs regarding our extension of Bedny's perspective of activity theory about the elaboration of the SEO promotion technique. Practical implications of the extension of Bedny's perspective of activity theory are introduced for promotion managers.

Keywords: search engine, SEM, SEO promotion technique, activity theory, web-mediated marketing communications and customer's online information seeking behavior.

Introduction

Profit and non-profit organizations from different sectors and of all sizes seem to be heavily interested in and focus on the online market with their projects and ideas, realizing that the web presents very significant and attractive marketing opportunities. According to Achille (2008), European online shoppers are heavy Internet users, having made 1.3 billion purchases in a six-month period during 2007, spending on average € 747,00 each. Consumers are expressing their immediate purchasing needs using search engines, often resulting in their purchase of products and services (Batista, 2008). Businesses are quickly realizing that search engines are a prime source for these new leads and customers (Olbrich and Schultz, 2008), that's why search engines are considered (among other online technologies, i.e. RSS) to be the most dynamic marketing newest online communication channels (Olbrich and Schultz, 2008; Barnes, 2007).

According to Web Design Library (available at: http://www.webdesign.org/), SEO can be defined as a natural or rather an organic way of ensuring that a website comes out on top when someone searches for a particular product or a particular keyword. The objective of SEO is the increase of web visitor counts by ranking the website very high in the results of searches using the most appropriate keywords describing the content of the website. SEO not only makes use of keywords, although that is the most popular online promotion technique of conducting SEO processes, but it can also carry out different kinds of searches including image search, local search, and industry-specific vertical searches.

SEO, as the most important technique in a Search Engine Marketing (SEM) process and as part of an internet marketing strategy, can be utilized primarily for increasing a web site's ranking and lead to web domination (Olbrich and Schultz, 2008; Thelwall, 2001). SEO can take into account how search algorithms work and what exactly online customers search for, in terms of user-centered design and online customer value (McMahon and Griffy-Brown, 2009) and cost-effectiveness (Kennedy and Kennedy, 2008). An approach, which is grounded on activity theory, as Krishnamurthy (2005) observed. According to Olbrich and Schultz (2008), since online searchers seek for information through search engines, marketers have been interested in addressing these prospective customers due to the existing involvement.

Research aim. Based on the above, the paper will examine the possibility of an extension of Bedny's theoretical perspective of 'activity' theory as an effective framework for SEO contextual issues,

which can be used to aid the design and analysis of SEO promotion technique investigations.

Human information-seeking behavior is a subject of increasing interest in many disciplines (Xu, 2007). The importance of this try arises from the transfer of a psychology theory; applied in the education practice to information science and especially in the online promotion management context. Wilson (2006) and Suh, Couchman, Park and Hasan (2003) argued about the value of activity theory, in order to investigate elements and structure of web-mediated communication activities. According to Ditsa (2003), theoretical models from social psychology have been widely used by information systems researchers as theoretical foundations to explain and predict online information systems use, such as search engines.

Quite recently, activity theory seems to gain some focus by marketing scholars. According to the recent invitation (2009) of the special issue: "Marketing as Practice" of the *Scandinavian Journal of Management*, activity theory is characterized as one of the critical perspectives that is warmly welcome in the forthcoming contributions.

Assumptions of the paper.

1. Approaching the activity theory by Bedny from an online promotion management aspect, the contribution of the conceptualization in promotion management can be approached as a framework for SEO online promotion technique.

2. SEO's objective is to increase web visitor counts by ranking an organization's web site very high in the results of searches using the most appropriate keywords describing the promotion offer through a web site. Therefore, effective SEO promotion technique can result in higher sales and greater revenue. If any type of organization plans to use internet marketing to be recognizable and boost sales of the offered solutions online, it is essential

to know a good deal about how SEO, an innovative online promotion technique, can work more effectively and efficiently.

Introducing the activity theory for online promotion techniques – reasoning the focus of the paper. Human-Computer Interaction (HCI) has existed as a research domain and gained a reputation as one of the core elements in designing online applications.

Activity theory, as a potential framework for HCI research (Kuutti, 1995), contains an overview on HCI research and discusses the potential of Activity Theory for HCI. The potential of Activity Theory for HCI is shown in activity theory: implications for human-computer interaction (Kaptelinin, 1996) as well as its basic principles and their impact on HCI.

Activity theory (a fundamental theory of Soviet psychology literature) is an emerging multidisciplinary theory and international community of scientific thought united by the central category of activity — a community reaching far beyond the original background (Coen, 1998). In a broad sense, the activity theory is a philosophical and cross-disciplinary framework for studying different forms of human practices as processes of development.

Bedny's theoretical perspective of activity theory can be well applicable to the conduct of information behavior research of online customers for the new dynamic marketing newest online promotion channels, such as the search engines. An activity-theoretical approach to information behavior research would provide a framework for the elaboration of SEO contextual issues, for the discovering of parameters that affect information behavior, which can be used to aid the design and analysis of SEO promotion technique investigations.
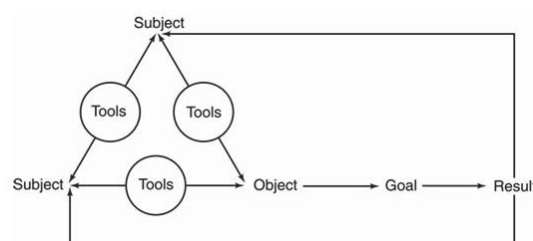

Fig. 1. Conceptual framework – Bedny's representation of activity theory (Bedny, 2003)

The knowledge of the Bedny's theoretical perspective of activity theory, as a behavioristic framework for the elaboration of SEO promotion technique, will guide the collection and the analysis of the data.

Based on the above, we will present the research themes that we aim to investigate in this paper.

Research question. Can Bedny's theoretical perspective of 'activity' theory be extended as an

effective framework for SEO contextual issues, which can be used to aid the design and analysis of SEO promotion technique investigations?

Previous research on extensions of activity theory in the web-mediated marketing communication and customer's online information-seeking behavior. Uden, Valders and Pastor's work (2008) defined a web application's requirements, based on the analysis of the main notions of activity theory. According to the authors, activity theory constitutes a valuable tool for analyzing web applications and provides the web application developers with a model that allows them to properly specify navigational and organizational requirements.

Xu (2007) proposed an integrated framework, based on activity theory, with a focus on interactive information retrieval behavior. According to the author, this framework was not only comprehensive and integrated, but also offered an explanation of the mechanisms governing the interaction between users' cognitive states and their manifested behavior when using an information retrieval system.

Suh, Couchman, Park and Hasan (2003) demonstrated a conceptual model of web-mediated communication (WMC). The authors employed activity theory to investigate elements and structure of communication activity via a web site. They have suggested some implications for further study of WMC. Ultimately, this study provided a conceptual foundation for the design and evaluation of a corporate web site. The authors stated that a corporate web site is certainly different from traditional mass media. Likewise, in marketing WMC was far different from traditional mass media advertising. This fact called for the development of a new framework for studying WMC. In this study, the term "web-mediated marketing communications" was defined as the firm's use of a web site for marketing purposes.

Research & epistemological approach. SEO promotion technique, through the key features of Bedny's perspective of activity theory (subject, tools, object, goal and results) is a very new research field. The conceptual character of the activity theory by Bedny in online promotion is structural for the ontological approach (Ticehurst and Veal, 2000) that we will adopt in this paper. The critical-hermeneutic approach will allow discovering concepts and broader connections in this research framework.

Originality of the paper – contribution to knowledge. Search engines seem to be one of the most dynamic marketing newest online promotion channels, as they are a prime source for getting more and more online customers (Olbrich and Schultz, 2008; Barnes, 2007). There is a significant literature in information research on constructs, such as activity theory (Zott and Amit; Uden, Valders and Pastor, 2008; Marken, 2008; Akhurst, 2007; Xu, 2007) and tools for activity systems (Critchlow, 2009; Golliher, 2008; Goetsch, 2008; Falk, Sockel and Chen, 2005). In contrast, activity system constructs, such as "subject", "object" and "goal statement", are relatively unexplored. Encouragingly, the literature reaffirms the critical role of SEO and SEM as part of an internet marketing strategy, which can be utilized primarily for increasing a web site's ranking and lead to web domination (Olbrich and Schultz, 2008; Thelwall, 2001); and activity theory seems to be realized as a critical perspective in the e-marketing literature according to Krishnamurthy (2005), and in the marketing literature (in general), according to the recent publication of the *Scandinavian Journal of Management* for the special issue: "Marketing as Practice".

Table 2 confirms that there is a zero research activity of activity theory in the e-marketing literature and especially in SEM. It sounds logical because the only refereed journal, focused on search engine marketing themes, is the *Search Engine Marketing Journal*, which was recently launched (2007). The existing search engine marketing research papers (not based on the activity theory) are focused on specific activity theory concepts: "subject", "tool" and "result" (mostly after 2007).

No study, till now, has offered a new perspective for promotion managers of an online promotion technique, such as the SEO, based on Bedny's theoretical perspective of activity theory and especially regarding the critical role of the elements of *subject, tool, object, goal* and *result* through an *SEO activity system*.

We strongly believe that the extension of Bedny's theoretical perspective of 'activity' theory is a behavioristic framework for SEO contextual issues. Such a framework for promotion managers can be proven valuable in terms of design, analysis and effectiveness measurement of the SEO promotion technique and will receive a significant attention in the marketing literature in the nearest future.

1. Theoretical framework: "Bedny's theoretical perspective of activity theory"

In this section, we will present the theoretical framework of the present study, based on Bedny's theoretical perspective of activity theory, introducing the fundamental definitions and assumptions (see Bedny, Seglin and Meister, 2000) in accordance with Figure 1.

1.1. Definitions.

1. Activity: is a form of "doing" directed to an object. The theory uses the notion of an activity as the basis and unit of analysis. It is necessarily bound up with the concept of motive.
2. Subject: that is, a person or group of persons engaged in the activity, acting upon an object in ways directed by a predetermined goal, using tools in the course of the activity, which has some result (not always directly satisfying the intended goal).
3. Object of an activity: is that, which is modified and explored by a subject, according to the goal of the activity. Objects can be material things or intangibles, such as "consciousness of central issues".
4. Tool: may be physical or mental.
5. Goal: is closely associated with the concept of 'motive'.
6. Result: not always directly satisfying the intended goal. Establishes feedback to the subject or subjects engaged in the activity.

1.2. Assumptions.

1. An activity is motivated towards transforming an object into a result. Activities have an object and are defined by that object, while transformation of the object motivates the existence of the activity.
2. There is no activity without a motive; 'unmotivated' activity is not an activity that has no motive, but it is the one with a subjectively and objectively hidden motive.
3. A subject is a person that undertakes an activity, either individually or as part of a team. Subjects are people in different roles that transform materials and use information. Subjects are part of a collective effort.
4. Tools shape the way in which people interact with reality. Tools are shaped by other's experience with regard to their try to solve similar problems, and, thus, try to make the tool more useful or efficient. The use of tools is an evolutionary capture and use of knowledge that influences not only external behavior, but also the mental functioning of the individual and future tool design. Tools provide the subject with enhanced capabilities. Besides, they restrict interaction to be from the perspective of the particular tool being used.
5. A goal directed system should be adopted where cognition, behavior, and motivation are integrated and organized by a mechanism of self-regulation towards achieving a conscious goal.
6. The result of an activity may or may not be one that accomplishes the object, if there is one in the representation.

2. Literature review

2.1. Literature review process. The literature review process is developed through the following three (3) stages:

1. *Bibliography collection and search strategy*: For the needs of the search, we have adopted *"briefsearch"* and *"citation pearl growing"* search strategies. The first strategy helped us to collect a series of research works (quite fast). In order to achieve an adding value in the search process, a second search strategy is adopted, which helped us to identify some key research works in order to adopt the existing terminology and concepts, quite useful for the search of other research works. We believe that it was the most suitable approach in order to investigate a research topic almost unsearchable.
2. Based on the first stage, *an extension of the literature review will be achieved progressively*.
3. *Abstractive synopsis and homogenization*, based on the keywords, will allow us to categorize the research works. We believe that the G.I.S.T. principle will provide us with a safe guide in order to identify broader groups arisen from the research question.

2.2. Conceptual mapping. Based on the activity theory by Bedny and the research themes, the following conceptual mapping figure will help us to: a) deepen our understanding of the research themes; b) identify significant concepts; and c) recognize and identify the research activity for each conceptual category of the SEO, as an innovative online promotion technique.
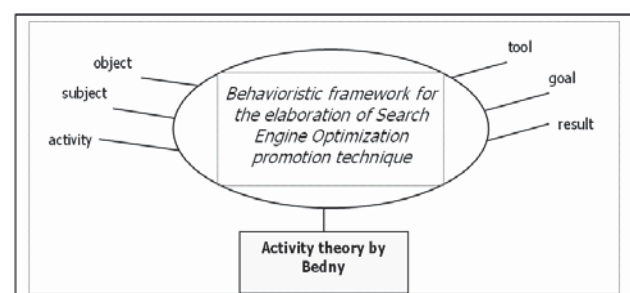

Fig. 2. Conceptual mapping

The above conceptual mapping was introduced, based on the keywords of the research aim, the theoretical framework and on the findings of the first stage of the literature review.

Based on the above, the literature review is structured as follows:
1. Categorizing the concepts.
2. Research activity for each conceptual category.
3. Classifying empirical evidence in chronological order.
4. Summary of the literature findings.

2.2.1. Categorizing the concepts. In terms of the investigation of the research question, we will categorize the concepts linked to the basic concept of the "behavioristic framework for the elaboration of Search Engine Optimization (SEO) promotion technique".

Table 1. Categorization of the concepts linked to "behavioristic framework for the elaboration of SEO promotion technique"

Basic concept / Category	"Behavioristic framework for the elaboration of SEO promotion technique"
A.	a. Activity
B.	b. Subject
C.	c. Object
D.	d. Tool
E.	e. Goal
F.	f. Result

2.2.2. Research activity for each conceptual category. In this subsection, we will present the relative research activity for each conceptual category of the examined concept of "behavioristic framework for the elaboration of SEO promotion technique", according to the categorization of the above subsection. In the following table (see Table 2) we will present the research works (presented in international academic journals and proceedings of international academic conferences), based on the keywords of the conceptual mapping and the G.I.S.T. literature review principle.

Based on an initial judgmental sample of fifty-five (55) published research works (selected at the first stage of the literature review, using the above conceptual categories as keywords), we have scanned, and reached at one to the following thirty (30) research works (see Table 2), as an indicative research activity for the basic concept of this study. The search and process stage took place from May 2 to June 15, 2009.

According to Olbrich and Schultz (2008), the search engine literature is founded in the area of information retrieval. They comment that data availability (on-line) was the initiative for extensive research on search engines' algorithms and architecture. But, there is a zero research activity of activity theory in the e-marketing literature and the only refereed journal, focused on search engine marketing themes, is the *Search Engine Marketing Journal*, which was recently launched (2007).

Therefore, we have to broaden the selection of research papers, based on activity theory focusing on web-mediated communication applications. Activity theory based research papers focusing on web-based learning and teaching applications were not included, in order to comply with the research aim of the present study.

In the following figure (Figure 3), we illustrate the proportion of search engine marketing research papers and research papers based on activity theory:
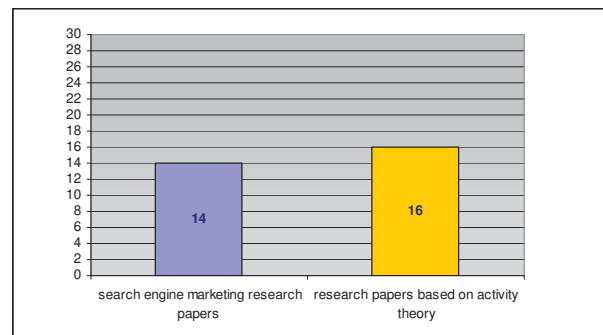

Fig. 3. The proportion between search engine marketing research papers and research papers based on activity theory focusing on web-mediated communication applications

Based on the above diagram, it seems that there is an almost equiponderant representation of both categories in the final sample of the thirty (30) published research works.

A short description of the thirty (30) published research works is presented in Table 2.

Table 2. The research activity for each of the conceptual categories of "behavioristic framework for the elaboration of SEO promotion technique" presented in chronological order (newest to oldest)

Categories of concepts linked to "behavioristic framework for the elaboration of SEO promotion technique"		Empirical evidence	Description	N=30
A.	Activity	Zott and Amit (2009)	This paper addressed the conceptualization of firm's business model as a system of interdependent activities that transcends the focal firm and spans its boundaries. The authors suggested two (2) sets of parameters that activity systems designers need to consider: *design elements* – content, structure and governance – that describe the architecture of an activity system; and *design themes* – novelty, lock-in, complementaries and efficiency and the sources of the activity system's value creation.	10
		Uden, Valders and Pastor (2008)	This paper addressed the improvement of web applications modeling and development of existing methods from the cultural-historical activity theory perspective. According to the authors, activity theory constituted a valuable tool for analyzing software requirements. Furthermore, the use of a task-based activity theory model provided web application developers with a model that allowed them to properly specify navigational and organizational requirements.	

Table 2 (cont.). The research activity for each of the conceptual categories of "behavioristic framework for the elaboration of SEO promotion technique" presented in a chronological order (newest to oldest)

Categories of concepts linked to "behavioristic framework for the elaboration of SEO promotion technique"		Empirical evidence	Description	N=30
A.	Activity	Marken (2008)	This paper addressed a case analysis of an activity done with the global sales and marketing training department of a U.S.-based Fortune 500 multinational corporation. With a facilitator coaching them in its use, the team was able to use activity theory both as a debriefing tool and proactively to plan a training intervention in Japan. According to the author, because of the team's work, potential cultural conflicts were avoided, improvements for later training interventions were identified, and knowledge and experience were mutually shared.	10
		Akhurst (2007)	This paper addressed the exploration of the utility of a model of activity theory as developed by Engeström, as an integrative tool. According to the author, activity theory provided a means to consider multiple levels of activity, highlighted the interaction of various factors, and provided a means to consider the differing perspectives of participants in the project. The utility of this model was discussed, and potential further developments in the field were mentioned. The article also outlined key outcomes of the project and the ways in which its success had influenced the development of other initiatives.	
		Xu (2007)	This paper addressed an integrated framework, based on activity theory with a focus on interactive information retrieval behavior. According to the author, this framework was not only comprehensive and integrated, but it also explained the mechanisms governing the interaction between users' cognitive states and their manifested behavior when using an information retrieval system. A set of four (4) propositions was advanced to describe the mechanisms.	
		De Freitas and Byrne (2006)	This paper addressed the introduction of Activity Analysis and Development (ActAD) model, which was used as an analytical tool in the design and development of an information system for an anti-retroviral treatment (ART) clinic in South Africa. According to the authors, the usefulness of applying the ActAD model was shown in this case study, which focused on the investigation and observation of the quality of data and its use for decision support in the ART clinic. The authors established the usefulness of the ActAD model in four (4) areas. These included the identification of: the need for change, viewing information systems as part of the work activity, recognizing the role of different stakeholders, and the need for on-going support. They concluded that activity theory was a useful tool for information systems development and, in particular, the ActAD model was a tool, which enabled a more holistic approach to be taken in information systems development.	
		Crawford and Hasan (2006)	This paper addressed the demonstration of the variety of IS topics where activity theory based approach was able to add richness and insight. The authors showed the application of activity theory to the study of socio-technical systems, which mediated complex, collective activities in the modern workplace and in everyday life. Vignettes from five on-going research projects were reported in order to illustrate not only the explanatory power of the activity theory research framework but also its use in determining appropriate methods used to manage the data collection and analysis processes as well as its interpretation.	
		Bertelsen and Godsk (2004)	This paper addressed the presentation of an activity theory based tool for early website usability assessment called Website Activity Walk (WAW). According to the authors, WAW was an attempt to build a cheap and effective tool for early, formative usability inspection, based on activity theory. They also observed the tendency of a growing interest in ways to use activity theory as a tool for understanding computer applications in context.	
		Uden and Willis (2001)	This paper addressed the description of a case study involving the use of activity theory for the design and evaluation of a tourist information kiosk. According to the authors, the mainstream framework of computer-interaction research of cognitive psychology has come under increasing criticism lately because of the gap between research results and practical design. To overcome these limitations, an alternative approach to interface design was necessary. Activity theory incorporated notions of intentionality, history, mediation, motivation, understanding, culture and community and it is these aspects that have proved attractive to interface design.	
		Hasan (1999)	This paper addressed the basic principles of activity theory as they apply to IS and HCI, with particular emphasis on those systems, which provide knowledge about the progress of their organization to senior managers, through a longitudinal case study to analyze an extensive project that attempted, with limited success, to produce management support systems in an organization. According to the author, the activity theory analysis indicates that an integrated IS and HCI approach would have improved the outcomes of this project.	
B.	Subject	Lutze (2008)	This paper addressed the presentation of techniques for finding targeted keywords in any market and common mistakes made by search engine marketing (SEM) firms. According to the author, running paid search campaigns was a recommended first step in any search engine optimization (SEO) campaign. The results from a paid marketing campaign can provide valuable data for any solid long-term, SEO work.	2
		Christ (2007)	This paper addressed internet effects exploration on the field of public relations, particularly the transforming ways how organizational stakeholders, including the news media, seek information and communicate. The author suggested that there were ramifications for PR professionals who didn't adapt to the identified changes. Coverage was also provided on several important technologies and trends that were shaping the future of public relations.	

Table 2 (cont.). The research activity for each of the conceptual categories of "behavioristic framework for the elaboration of SEO promotion technique" presented in a chronological order (newest to oldest)

Categories of concepts linked to "behavioristic framework for the elaboration of SEO promotion technique"		Empirical evidence	Description	N=30
C.	Object	Widén-Wulff and Davenport (2007).	This paper addressed the discussion of the link between information sharing and organizational knowledge production in two very different organizations: a company that handled insurance claims and a small, entrepreneurial hi-tech company. The version of activity theory, that has been developed by Engeström and other Finnish researchers, was used to analyze the data. This has provided highly specific accounts of information sharing as a constituent of the varied processes that contribute to the development of organizational knowledge. According to the authors, the overall analysis allowed them to explain how and why organizational information sharing happened in terms that go beyond the cognitive and descriptive accounts of our earlier studies.	3
		Yucha and Sasi (2005)	This paper addressed the introduction of activity theory as a basis to demonstrate how semantic information could be retrieved from objects identified in an image, by using an image segmentation technique by the Berkeley Digital Library Project (Blobworld), and combining it with object-to-community relationships, a high-level understanding of the image could be demonstrated. According to the authors, traditional methods of image retrieval require that meta-data were associated with the image, commonly known as keywords. These methods powered many search engines and accomplished reasonable amounts of search accuracy.	
		Montgomery, Sharafi and Hedman (2004)	This paper addressed the development of a general model of engagement modes that could be used for understanding how IT-related activities were shaped by properties of the user and the IT object. The authors used a questionnaire involving items on IT engagement and the experience of flow was administered to 300 participants. The research results supported an engagement mode (EM) model involving 5 different engagement modes (enjoying/acceptance, ambition/curiosity, avoidance/hesitation, frustration/anxiety, and efficiency/productivity) characterized on 3 dimensions (evaluation of object, locus of control between subject and object, and intrinsic or extrinsic focus of motivation). The flow experience follows from a balance between enjoying/ acceptance and efficiency/productivity propelled by ambition/curiosity. According to the authors, this general model could provide a platform for considering how IT users, IT applications, and IT environments should work together to yield both enjoyment and efficiency.	
D.	Tool	Critchlow (2009)	This paper addressed the exploration of crucial elements, in terms of tactics that could be applied to many different kinds of sites and ways of thinking that benefit websites of any size. The author presented a variety of tactics that could be used to form a cohesive scalable optimization strategy. According to the author, this was less about researching and optimizing for individual key-phrases and more about considering the portfolio of words and phrases driving traffic to a large website and improving the aggregate performance. These considerations were already forming a part of the tactics and strategies at some of the largest web properties.	8
		Golliher (2008)	This paper addressed the discussion of search engine ranking algorithms and the variables involved, web spam detection, hyperlink analysis, duplicate content issues, and their underlying structure. Additionally, the author analyzed on-page and off-page variables -- two classes of search engine ranking factors -- and their possible implications for ranking web documents.	
		Goetsch (2008)	This paper addressed the discussion of the potentiality of expansion of link building through creative methods, which could lead to optimum results. According to the author, obtaining inbound links from other websites with an eye to improving search engine ranking and increasing traffic to a site or that of a client could be time consuming and tedious.	
		Falk, Sockel and Chen (2005)	This paper addressed basic business constructs within the scope of website design, addressing the needs of the users could introduce an array of intricate issues because of the diversity of the potential site visitors, in terms of e-commerce activities. According to the author, e-commerce is about building relationships and making money. Unfortunately, organizations often try to adopt e-commerce techniques without understanding them and/or without a sound business model.	
		Gobbin (2004)	This paper addressed the examination of the use of subjective properties in modeling architecture for cooperative agents using Agent Communication Language (ACL) that was used as a mediating tool for cooperative communication activities between and within software agents. According to the author, the role that subjective and objective properties had in explaining and modeling agent internalization and externalization of ACL messages was investigated and related to mediated activity theory. A novel agent architecture ALMA (Agent Language Mediated Activity), based on the integration of agents' subjective and objective properties within an agent communication activity framework, was presented.	
		Green (2003)	This paper addressed the tendency of increasingly sophisticated technology tools and approaches to utilizing search engines to achieve marketing goals. According to the author, search engines still play an increasingly important role in internet marketing and commerce. Having once been sidelined by the major portals in favor of other 'sticky' features such as news, search was once again central to portal strategies. Yahoo has spent almost US $2 billion acquiring other search technology providers to compete with Google more directly. The world-wide search market was forecasted to grow from US $2.1 billion in 2003 to US $7 billion by 2007.	

Table 2 (cont.). The research activity for each of the conceptual categories of "behavioristic framework for the elaboration of SEO promotion technique" presented in a chronological order (newest to oldest)

Categories of concepts linked to "behavioristic framework for the elaboration of SEO promotion technique"		Empirical evidence	Description	N=30
D.	Tool	Fjed, Lauche, Bichsel, Voorhorst, Krueger and Rauterberg (2002)	This paper addressed the discussion of how the understanding of activity theory has shaped the design philosophy for groupware and how the authors applied it. According to the authors, activity theory was based on the concept of tools mediating between subjects and objects. In this theory, an individual's creative interaction with his or her surroundings could result in the production of tools. When an individual's mental processes were exteriorized in the form of tools – termed objectification – they become more accessible to other people and were, therefore, useful for social interaction.	8
		Green (2000)	This paper addressed the exploration of the interrelation between web publishing and information retrieval technologies. According to the author, the different elements of the web had implications for indexing and searching web pages through the two (2) main platforms used for searching the web – directories and search engines – which became combined to create one-stop search sites, resulting in the web business model known as portals.	
E.	Goal	McMahon and Griffy-Brown (2009)	This paper addressed the proposition of a search engine marketing process for nonprofit organizations in order to optimize the organic search results. According to the authors, this process could enable the organization to fine-tune its web presence according to its values and the feedback from the marketplace regarding keywords and search terms that potential constituents might find useful to them. The authors considered the proposed process as an answer of the call in the literature to nonprofits for a finer-grained approach to segmentation, more specific targeting and better branding differentiation through values.	2
		Mursu, Luukkonen, Toivanen and Korpela (2007)	This paper addressed the proposition of a participatory development model called the Activity Driven ISD Model, aimed at developing work and information systems in parallel, in three (3) phases: understanding the present state of an activity; describing the goal state of the activity; and planning for the transformation to the goal state. According to the authors, the Activity Driven ISD Model met six (6) of seven (7) criteria set and there are encouraging possibilities for its applicability to the practitioners.	
F.	Result	Murphy and Kielgast (2008)	This paper addressed the investigation of the effectiveness of search engine marketing in order to make more visible and easier to find for existing and potential customers for small and medium-sized hotels, through eight case studies via in-depth semi-structured interviews. The interviews revealed that the poor exploitation of SEM was a result of poor marketing planning and lack of control of their web site through outsourcing key web development and optimization activities. The authors highlighted the critical issues and explored the potential to re-orient the small operator towards the opportunities of successful SEM and fully utilize their web site as a tactical and strategic marketing tool.	5
		Kennedy and Kennedy (2008)	This paper addressed the evaluation of Yahoo and Google search engines in order to test which of them was more cost effective for a small manufacturing firm, through the observation of seven consecutive campaigns for click-through rates (CTRs), average cost per click (CPC) and average position of keywords between the two search engines. According to the findings, the average CPC was higher with Google. The authors incorporated set a budget with Google and Yahoo to stay below a certain dollar limit, thus, the total costs were the same. That would make the difference in the average CPC rather significant. Management also noticed a higher CTR on Yahoo than on Google. Thus, it appeared that Yahoo outperformed Google most of the time in the monthly samples. The company had the impression that Yahoo was a better company for PPC advertising when the marketing budget was small.	
		Gadish (2008)	This paper addressed the evaluation of a 2-year marketing strategy utilized by a newly created online store for a dental supply company. The author discussed the process and challenges of marketing this website with a tight budget.	
		Rimbach, Dannenberg and Bleimann (2007)	This paper addressed the examination of marketing and sales implications of page ranking techniques, in terms of how companies used knowledge of their operation to increase the chances of attracting customers. Data have been collected through PageRank and Topic Sensitive Page Ranking in order to evaluate existing search engine optimization strategies and to identify new methods for leveraging the internet for sales and marketing purposes. According to the findings, different strategies have to be adopted to attract effectively potential customers.	
		Thelwall (2001)	This paper addressed the discussion of business use of the web and related search engine design issues as well as research on general and academic links before reporting on a survey of the links published by a relatively random collection of business web sites. The results of the survey indicated that around 66 percent of web sites carried external links, most of which were targeted at a specific purpose, but that about 17 percent publish general links, with implications for those designing and marketing web sites.	

2.2.3. *Classifying empirical evidence in chronological order.* Based on the above table (see Table 2), we will present the chronological order of the thirty (30) research works. Given that the extension of Bedny's theoretical perspective of activity theory applied to SEO promotion

technique is a non-researched area and is presented for the first time in the marketing literature, the chronological order of the above conceptual categories will allow us to identify: i) the level of research activity, ii) the research priorities for each time period, iii) the research gaps, and also iv) valuable research directions and suggestions for further research.

The above research works were classified into six (6) categories, according to the conceptual categories of the "behavioristic framework for the elaboration of SEO promotion technique". We have decided to present the chronological order according to the following two (2) periods: a) 1999-2004 and b) 2005-2009. In the below diagram (see Figure 4) the thirty (30) publications are presented, with some interesting remarks.
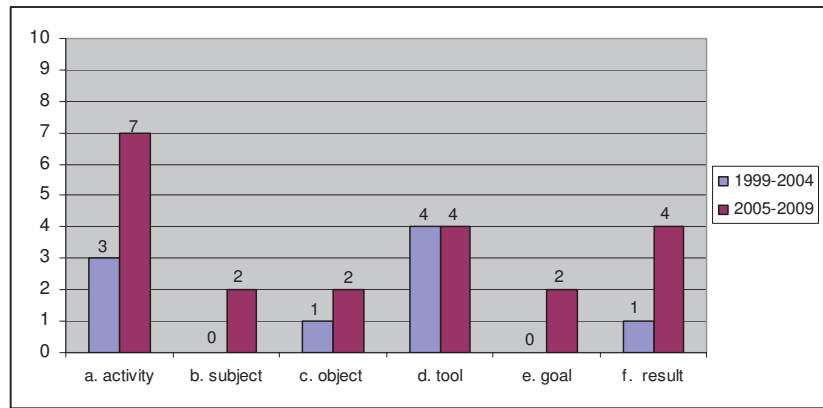

Fig. 4. The research activity for each of the conceptual categories of "behavioristic framework for the elaboration of SEO promotion technique" for the last decade (1999-2009)

Remarks based on the above diagram:

a. The research activity with regard to the application of activity theory to web-mediated communication applications significantly increased over the last four years.
b. Activity theory application, as a systemic approach, gains much more research interest in comparison with other activity theory elements.
c. Although activity system elements of "subject", "object", "goal" and "result" gain the research interest over the last four years, the research activity is still on a very low level.
d. There is a consistency regarding the research interest for investigating tools in activity systems applied to web-mediated communication applications, since 1999.

2.2.4. Summary of the literature findings. The findings of the literature review are summarized as follows:

♦ *Regarding the "activity" element:* it seems that activity theory constitutes an analytical framework for the activities of a marketing department and especially a valuable tool for e-marketing activities, such as the analysis of online information system requirements, based on the focus on interactive information retrieval behavior. Evidence showed us that a holistic approach of activities enables the organizations to create value, only if activity system designers consider design elements,

such as content, structure and governance, and design themes, such as efficiency, novelty and complementaries, as sources of activity system's value creation for online users.

♦ *Regarding the "subject" element:* it seems that a subject (the project team) must take under serious consideration that running paid search campaigns is a prerequisite step for an SEO campaign and it must be aligned with the overall corporate and marketing communications strategy of the organization.

♦ *Regarding the "object" element:* it seems that the definition of engagement modes between subject and object in an activity plays a significant role in terms of an effective and efficient management of an activity. Evidence showed us that activity theory could be used as a basis to show how semantic information can be retrieved from objects identified in an image and can be associated to search engines and accomplish reasonable amounts of search accuracy requiring that keywords (meta-data) are associated with the image.

♦ *Regarding the "tool" element:* it seems that activity theory has shaped the design of web mediated marketing communications philosophy, as it is based on the concept of tools mediating between subjects and objects, which are influenced by individual's creative interaction with his/her surroundings and the increasingly sophisticated technology tools and approaches. It is evidenced that there is a

tendency of increasingly sophisticated technology tools and approaches to utilizing search engines to achieve marketing goals, as they play a crucial role in internet marketing and commerce but they need to be understood and addressed under a business model.

♦ *Regarding the "goal" element:* it seems that the existence of an organized search engine marketing process is clearly correlated to the level of optimization of organic search results. Evidence showed us that there is a clear impact of an organized search engine marketing process on goal statement and a need for goals to be adapted with regard to keywords that communicate values, because of the feedback from the online market. It is underlined that such an approach of goal statement seems to have a significant impact on effective online segmentation and branding, through values. Evidence also underlines the significance of the goal statement of an activity based information system, with regard to the: a) understanding of the nature of the activity, b) description of the goal statement, and c) planning for the transformation to the goal statement.

♦ *Regarding the "result" element:* it seems that search engine marketing is a crucial tactical and strategic marketing tool and it must be aligned with an organization's overall marketing planning. In addition, it is shown that in terms of search engine performance measurement, there is a tendency to be correlated with the level of an organization's marketing budgets. Evidence also supports those different SEO strategies have to be adopted in order to attract effectively potential online customers as a marketing-driven result.

Based on the theoretical framework of the present study, we can interpret the above findings as follows:

♦ Search engine marketing (SEM) and search engine optimization (SEO) are motivated towards transforming an object into a marketing result. SEM and SEO activities are determined by how semantic information can be retrieved from objects identified in an image and can be associated to search engines, while transformation of the object motivates the existence of the SEM and SEO activities.

♦ There are no SEM and SEO activities without a marketing motive.

♦ SEM project teams' members have different roles regarding the transformation of materials and use of information but they are the part of a collective effort, which means that they must be aligned with the overall marketing strategy of the organization.

♦ SEM and SEO tools shape the way in which online customers interact. SEM and SEO tools are shaped by online customers' experience regarding their try to solve information seeking problems, and, thus, try to make the SEM and SEO tools more useful or efficient.

♦ The use of SEM and SEO tools is an evolutionary capture and use of knowledge that influences not only online customers' behavior, but also the mental functioning of the individual and future tool design, as individual's creative interaction and the increasingly sophisticated technology tools and approaches influence it.

♦ An SEM goal directed system should be adopted where online customers' cognition, behavior, and motivation are integrated and organized by a mechanism of self-regulation toward achieving a conscious goal through the communication of values.

♦ The marketing result of SEM and SEO activities may be the one that accomplishes the object.

As a conclusion of this section, the findings arisen from: a) the study of international empirical evidence, and b) their interpretation (based on the theoretical framework) have led us to an understanding of search engines, as a dynamic promotion channel. It seems that Bedny's theoretical perspective of activity theory can provide the basis for an extension of a framework analysis for the elaboration of SEO promotion technique.

3. Methodology

3.1. Research method. The investigation of how promotion managers can see SEO as a dynamic on-line promotion technique under Bedny's activity theory is a non-researched area.

In order to determine Bedny's theoretical perspective of activity theory constructs for SEO promotion technique and their relationship, it is incumbent upon marketing scholars to take the above perspective, which allows these issues to be arisen.

The use of the case study is considered to be of high value in our analysis because in the empirical studies none of promotion phenomena is very well understood (Cutler, 2004). The case study is introduced in order to reveal very new constructs and to attempt to establish an initial understanding of the constructs and their relationship with other constructs (Yin, 1994).

Unit of analysis. Human activity is the basic unit of analysis in activity theory. Activity theory incorporates notions of understanding such as: mediation, motivation, and culture.

3.2. Selection of a critical case and determination of data gathering and analysis techniques. *3.2.1. Selecting the critical case.* Flyvbjerg (2006) suggested since 1991 the concept of the *critical case*, where a case of particular interest and strategic content in relation to the investigated research themes are presented. We believe that the critical case of Increase Visibility Inc. will give us valuable information on the potentiality of activity theory application to modern online promotion channels, such as the SEO, and, thus, the phenomenon studied can become more visible, as Stake (1994) argued. The different aspects of a context, from which a particular problem situation originates, can become increasingly visible and more accessible for a promotion management researcher.

We consider the case of Increase Visibility Inc. (http://www.increasevisibility.com) as critical, because this company leads the industry in providing superior website optimization results. It provides unmatched and customized search engine marketing services to meet the needs of different kinds of websites, industries, audiences, and marketing goals. It is the only search engine-marketing firm today that offers services focused on specifically driving qualified traffic to the websites and then helping to convert them into paying customers/clients.

Latest media recognition of the company was the selection for PromotionWorld's "Best SEO Company" listing for January 2009. The Best SEO Company Awards are based on the offered services, package diversity, value, customer service, feedback and website popularity of the selected companies.

Quite impressive are the rankings awarded the last three (3) months for June 2009 – August 2009:

#1 – Best Search Engine Optimization Company (Canada), August 2009.
#1 – Best Search Engine Optimization Company, August 2009.
#1 – Best Reputation Management Company, August 2009.
#2 – Best Search Engine Optimization Company (Australia), August 2009.
#3 – Best Link Building Company, August 2009.
#3 – Best Social Media Optimization Company, August 2009.
#5 – Best Pay Per Click Management Company, August 2009.
#1 – Best Search Engine Optimization Company (Canada), July 2009.
#1 – Best Search Engine Optimization Company, July 2009.
#1 – Best Reputation Management Company, July 2009.
#2 – Best Search Engine Optimization Company (Australia), July 2009.
#3 – Best Social Media Optimization Company, July 2009.

#3 – Best Link Building Company, July 2009.
#5 – Best Pay Per Click Management Company, July 2009.
#1 – Best Reputation Management Company, June 2009.
#1 – Best Search Engine Optimization Company, June 2009.
#1 – Best Search Engine Optimization Company (Canada), June 2009.
#2 – Best Search Engine Optimization Company (Australia), June 2009.
#3 – Best Link Building Company, June 2009.
#3 – Best Social Media Optimization Company, June 2009.
#5 – Best Pay Per Click Management Company, June 2009.

3.2.2. Methodology for gathering the data from the critical case. Based on Uden, Valders and Pastor's work (2008), we have adopted the following methodology in order to gather the data in the case of Increase Visibility Inc.:

1. *Clarification of the purpose(s) of the activity system.* Clarification of the motives and goals of the activity system is very important. The purposes of this step are: a) to understand the context within which activities occur, and b) to reach a thorough understanding of the motivations for the activity being modelled and any interpretations of perceived contradictions.

2. *Analysis of the activity system and production of the activity system.* This step involves an in-depth definition of the components of the given activity, namely, the subject, object, tool, goal and result.

3. *Analysis of the activity structure.* This step involves decomposing each activity into actions and operations. An important key process here is to analyze the activity structure (all of the activities that engage the subject) that defines the purpose(s) of the activity system. The conceptual categories of Table 2 will lead the description of actions and operations of the activity structure.

3.3. Evaluation and analysis of the data. The data of activity structure analyses by the project team of Increase Visibility Inc. (the "subject") resulted from the performance of a website content analysis from June 10 to June 30, 2009 [in accordance with the website content analysis of Perry and Bodkin (2000)] utilizing the conceptual categories of "behavioristic framework for the elaboration of SEO promotion technique" of Increase Visibility Inc. case studies' website, available at: http://www.increase-visibility.com/case-studies/ca-se-studies.php (June 1, 2009).

The analysis of the data has led us to the following table (Table 3), which summarizes the findings, based on Bedny's perspective of activity theory:

Fig. 4. Increase Visibility Inc. homepage

Table 3. Summary of website content analysis findings from Increase Visibility's Inc. case studies, based on the conceptual categories of Bedny's theoretical perspective of activity theory

Subject	tool	object	goal	result
\[Activity structure case: accountnet inc. Source: http://www.increasevisibility.com/pdf/accountnet.pdf\]				
Increase Visibility Inc.project team 1	Solution: Step 1: Keyword Analysis Step 2: Page identification Step 3: Website Analysis Step 4: On-Page Optimization Step 5: Off-Page Optimization (I. Reciprocal Link Building, II. Directory Submission, III. Profile Listing, IV. Social Book Marking, V. Local Marketing).	Improvement of the search engine rankings for the accounting software industry specific keywords related to Accountnet.	The defined goal of this campaign was to improve the search engine rankings for the industry specific keywords and to increase targeted traffic to the Accountnet Inc. website.	Since Accountnet, Inc. has started using SEO services, they have increased monthly page views from 3,943 to 8,737, more than 100%. Through the optimization tactics, there was a success in increasing the company's web presence increasing the company's monthly organic search traffic from 813 to 1,782 more than 100%. The link building services have increased the total number of inbound links by more than 400%. Increase Visibility Inc. has been able to achieve more than 25 TOP ten ranking positions including 11 #1 page ranking.

Subject	tool	object	goal	result
\[Activity structure case: advanced concepts in plastic surgery Source: http://www.increasevisibility.com/pdf/advancedconcepts.pdf\]				
Increase Visibility Inc.project team 2	Solution: Step 1: Keyword Analysis Step 2: Page Identification Step 3: Website Analysis Step 4: On-Page Optimization Step 5: Off-Page Optimization (I. Reciprocal Link Building, II. Press Release Submission, III. Article Submission, IV. Directory Submission, V. Profile Listing. VI. Social Bookmarking, VII. Shopping Feed Submission).	Improvement of the search engine rankings for the health-beauty industry specific keywords related to Advanced Concepts in Plastic Surgery.	The defined goal of this campaign was to improve the search engine rankings for the industry specific keywords and increase the targeted traffic to the Advanced Concepts in Plastic Surgery website.	Since Advanced Concepts has started using SEO services, they have increased monthly page views from 73 to 28,738 more than 50%. Through the optimization tactics, there was a success in increasing the company's web presence increasing their monthly organic search traffic from 0 to 2,832 more than 100%. The link building services have increased the total number of inbound links by more than 400%. Increase Visibility Inc. has been able to achieve more than 25 TOP ten ranking positions including 11 #1 page ranking.

Table 3 (cont.). Summary of website content analysis findings from Increase Visibility's Inc. case studies, based on the conceptual categories of Bedny's theoretical perspective of activity theory

Activity structure case: notarybonding Source: http://www.increasevisibility.com/pdf/notarybonding.pdf				
Subject →	tool →	object →	goal →	result
Increase Visibility Inc.project team 3	Solution: Step 1: Keyword Analysis Step 2: Page Identification Step 3: Website Analysis Step 4: On-Page Optimization Step 5: Off-Page Optimization (I. Reciprocal Link Building, II. Directory Submission, III. Social Bookmarking).	Improvement of the search engine rankings for the notaries' industry specific keywords related to Notarybonding.	The defined goal of this campaign was to increase the search engine rankings for industry specific keywords and the traffic to the Notarybonding website.	Since Notarybonding has started using SEO services, they have increased monthly page views in 15 days from 41,630 to 87,218 more than 100%. Through the optimization tactics, there was a success in increasing the company's web presence increasing their monthly organic search traffic from 17,006 to 37,564 more than 100%. The link building services have increased the total number of inbound links by more than 120%. Increase Visibility Inc. has been able to achieve 16 TOP twenty ranking positions including 7 #1 page ranking.
Activity structure case: penn scale manufacturing Source: http://www.increasevisibility.com/pdf/pennscale.pdf				
Subject →	tool →	object →	goal →	result
Increase Visibility Inc.project team 4	Solution: Step 1: Keyword Analysis Step 2: Page Identification Step 3: Website Analysis Step 4: On-Page Optimization Step 5: Off-Page Optimization (I. Reciprocal Link Building, II. Shopping Feed, III. Directory Submission, IV. Social Bookmarking).	Improvement of the search engine rankings for the business-industrial goods and services industry specific keywords related to Penn Scale Manufacturing.	The defined goal of this campaign was to increase the search engine ranking for industry specific keywords and traffic to the Penn Scales Manufacturing website.	Since Pennscale.com has been using SEO services, they have increased page views, as compared to the last five months, from 14,533 to 18,345 more than 20%. Through the optimization tactics, there was a success in increasing the company's web presence increasing their five monthly organic search traffic from 3,255 to 4,190 more than 25%. The link building services have increased the total number of inbound links by more than 600%. Increase Visibility Inc. has been able to achieve more than 9 TOP twenty ranking positions including 24 #1 page ranking.

4. Findings

Based on the available details from the website of the company and the above analysis, we present the findings:

♦ SEO activities by Increase Visibility Inc. are motivated towards transforming an object into a marketing result.

♦ There is a clear marketing motive of SEO activities by Increase Visibility Inc.

♦ Increase Visibility Inc. SEO project teams' members have different roles with regard to the transformation of materials and use of information but they are aligned with the overall marketing strategy of their clients.

♦ Indeed, Increase Visibility Inc. SEO tools shape the way in which online customers interact as they are adjusted according to online customers' experience regarding their try to solve information seeking problems.

♦ Increase Visibility Inc. incorporates; increasingly sophisticated technology SEO tools and approaches in order to influence online customers'/users' behavior.

♦ Increase Visibility Inc. indeed adopts an SEO

directed system, as online customers'/users' cognition, behavior, and motivation are integrated and organized by a mechanism of self-regulation toward achieving a conscious goal through the communication of values in the keywords.

♦ Increase Visibility Inc. is seeking for achieving marketing results for its clients regarding the SEO activities.

Based on the literature review and the case analysis findings, an extension of Bedny's theoretical perspective of activity theory, as a framework analysis for the elaboration of SEO promotion technique, is presented (see Figure 5).

As a conclusion of this section, the findings arisen from: a) the study of international empirical evidence, b) their interpretation (based on the theoretical framework), and c) the critical case analysis of Increase Visibility Inc., have led us to a better understanding of search engines as a dynamic promotion channel. It seems that our extension on Bedny's theoretical perspective of activity theory can provide an effective framework analysis for the elaboration of SEO promotion technique.
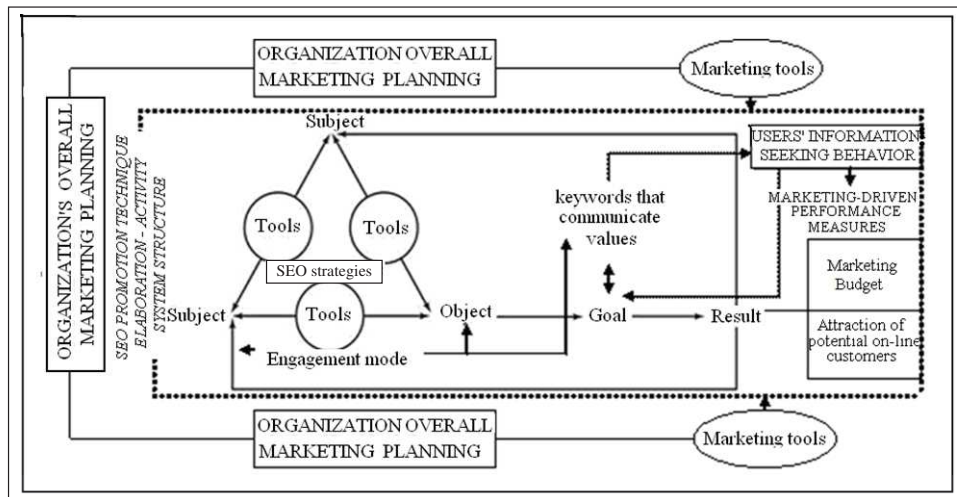
Fig. 5. An extension of Bedny's theoretical perspective of activity theory, as a behavioristic framework analysis for the elaboration of SEO promotion technique

5. Discussion

The research aim of the paper was to examine the possibility of an extension of Bedny's theoretical perspective of 'activity' theory as an effective framework for SEO contextual issues, which could be used to aid the design and analysis of SEO promotion technique investigations.

5.1. Degree of answering the research question and the support of the initial assumptions. Our organized literature review has led us to an initial judgmental sample of fifty-five (55) published research works (selected at the first stage of the literature review), in order to be scanned and reached at one to thirty (30) published research works. The findings showed us that:

♦ Search engine marketing (SEM) and search engine optimization (SEO) are motivated towards transforming an object into a marketing result. SEM and SEO activities are determined by how semantic information can be retrieved from objects identified in an image and can be associated to search engines, while transformation of the object motivates the existence of the SEM and SEO activities.

♦ There are no SEM and SEO activities without a marketing motive.

♦ SEM project teams' members have different roles regarding the transformation of materials and use of information but they are part of a collective effort, which means that they must be aligned with the overall marketing strategy of the organization.

♦ SEM and SEO tools shape the way in which online customers interact. SEM and SEO tools are shaped by online customers' experience

regarding their try to solve information seeking problems, and, thus, try to make the SEM and SEO tools more useful or efficient.

♦ The use of SEM and SEO tools is an evolutionary capture and use of knowledge that influences not only online customers' behavior, but also the mental functioning of the individual and future tool design, as individual's creative interaction and the increasingly sophisticated technology tools and approaches influence it.

♦ An SEM goal directed system should be adopted where online customers' cognition, behavior, and motivation are integrated and organized by a mechanism of self-regulation towards achieving a conscious goal through the communication of values.

♦ The marketing result of SEM and SEO activities may be the one that accomplishes the object.

The case analysis findings showed us that:

♦ SEO activities by Increase Visibility Inc. are motivated towards transforming an object into a marketing result.

♦ There is a clear marketing motive of SEO activities by Increase Visibility Inc.

♦ Increase Visibility Inc. SEO project teams' members have different roles regarding the transformation of materials and use of information but they are aligned with the overall marketing strategy of their clients.

♦ Increase Visibility Inc. SEO tools shape the way that online customers interact as they are adjusted according to online customers' experience regarding their try to solve information seeking problems.

♦ Increase Visibility Inc. incorporates increasingly sophisticated technology SEO tools and

approaches in order to influence online customers'/users' behavior.

♦ Increase Visibility Inc. adopts an SEO directed system, as on-line customers'/users' cognition, behavior, and motivation are integrated and organized by a mechanism of self-regulation toward achieving a conscious goal through the communication of values in the keywords.

♦ Increase Visibility Inc. seeks marketing results achievements for its clients regarding the SEO activities.

As a conclusion, the findings arisen from: a) the study of international empirical evidence, b) their interpretation (based on the theoretical framework), and c) the critical case analysis of Increase Visibility Inc., have led us to a better understanding of the online promotion techniques for dynamic marketing newest online promotion channels, such as the search engines. It seems that our extension of Bedny's theoretical perspective of activity theory can provide an effective framework analysis for the elaboration of SEO promotion technique.

Based on the above, we can accept the initial assumptions that: a) approaching Bedny's theoretical perspective of activity theory from an online promotion management aspect, the contribution of the conceptualization in promotion management can be approached as a framework for SEO online promotion technique, b) SEO's objective is to increase web visitor counts by ranking an organization's web site very high in the results of searches using the most appropriate keywords describing the promotion offer through a web site. Therefore, effective SEO promotion technique can result in higher sales and greater revenues. If any type of organization plans to use internet marketing to be recognizable and boost sales of the offered solutions online, it is essential to know a goal deal, about how SEO, an innovative online promotion technique, can work more effectively and efficiently.

5.2. Relating the findings to earlier work. Search engines seem to be one of the most dynamic marketing newest online promotion channels, as they are a prime source for getting more and more online customers (Olbrich and Schultz, 2008; Barnes, 2007). There is a significant literature in information research on constructs, such as activity theory (Zott and Amit; Uden, Valders and Pastor, 2008; Marken, 2008; Akhurst, 2007; Xu, 2007) and tools for activity systems (Critchlow, 2009; Golliher, 2008; Goetsch, 2008; Falk, Sockel and Chen, 2005). In contrast, activity system constructs, such as "subject", "object" and "goal statement", are relatively unexplored. Encouragingly, the literature reaffirms the critical role of SEO and SEM as part

of an internet marketing strategy, which can be utilized primarily for increasing a web site's ranking and lead to web domination (Olbrich and Schultz, 2008; Thelwall, 2001) and activity theory seems to be realized as a critical perspective in the e-marketing literature, according to Krishnamurthy (2005), and in the marketing literature (in general), according to the recent invitation of the *Scandinavian Journal of Management* for the special issue: "Marketing as Practice".

There is a zero research activity of activity theory in the e-marketing literature and especially in SEM, as the only refereed journal, focused on search engine marketing themes, is the *Search Engine Marketing Journal*, which was recently launched (2007). Despite the quite low level of the research activity, it is impressive that the focus of search engine marketing research papers (not based on the activity theory) is placed on the topics related to the activity theory concepts, such as "subject", "tool" and "result", mostly after 2007.

No study, till now, has offered a new perspective for promotion managers of an online promotion technique, such as the SEO, based on Bedny's theoretical perspective of activity theory and especially with regard to critical role of the elements of *subject, tool, object, goal* and *result* through an *SEO activity system.*

We strongly believe that our extension of Bedny's theoretical perspective of activity theory can be introduced as a framework for the elaboration of the SEO promotion technique by promotion managers and will receive a significant attention in the marketing literature in the nearest future. The importance of this try arises from the transfer of a psychology theory applied in the education practice to information science and especially in the online promotion management context.

5.3. Theoretical implications. Based on the assumptions of Bedny's theoretical perspective of activity theory, we could summarize some implications of the underlined theory to our extended model:

♦ The importance of this try arises from the transfer of a psychology theory applied in the education practice to information science and especially in the online promotion management context. It is evident that activity theory is valuable in order for web-mediated communication activities' elements and structure to be investigated. Theoretical models from social psychology have been widely used by information systems researchers as theoretical foundations to explain and predict online information systems use, such as search engines. Quite recently,

activity theory seems to gain more and more focus from marketing scholars.

♦ The theory considers the conduct of information behavior research of online customers and the marketing performance of search engines. An information seeking behavior basis of activity-theoretical approach, as a framework for the elaboration of SEO contextual issues, can be used to aid the design and analysis of SEO promotion technique investigations.

Based on the assumptions of Bedny's theoretical perspective of activity theory, we can identify some limitations of the above theory with regard to our new extended model:

♦ Traditional cognitive psychology of design of search engine marketing (SEM) applications is not able to penetrate the human side of the inter-face. In order to minimize these limitations an alternative approach to interface SEM design seems to be necessary. An extension of activity theory, such as ours (as a framework for SEO elaboration), can offer significant value to promotion managers with regard to SEM management, compared to the traditional cognitive psychology approach.

5.4. Practical implications. Since online searchers seek for information through search engines, marketers and promotion managers have been interested in addressing these prospective customers due to the existing involvement. We strongly believe that the extension of Bedny's theoretical perspective of 'activity' theory, as behavioristic framework for promotion managers, can be proven valuable in terms of design, analysis and effectiveness measurement of the SEO promotion technique. An activity-theoretical approach for online communication, would provide promotion managers with the basis for the elaboration of SEO contextual issues. Bedny's theoretical perspective of activity theory can be well applicable to the conduct of information behavior research of online customers for the new dynamic marketing newest online promotion channels, such as the search engines.

5.5. Further research. In accordance with: a) the interpretation of the literature review findings, and b) the discussion of the theoretical and practical implications of this paper, we will present our thoughts for further research for the research themes (see the conceptual categories).

The research activity regarding the application of activity theory to web-mediated communication applications significantly increased over the last years. Activity theory application, as a systemic

approach, gains much more research interest in comparison with each of the other activity theory elements. Activity system elements of "subject", "object", "goal" and "result" gain the research interest over the last four years but the research activity is still on a very low level. There is a consistency with the research interest regarding the investigation of tools in activity systems applied to web-mediated communication applications, since 1999.

We would strongly recommend the following in order to deepen our understanding of more dimensions of the framework analysis for the elaboration of SEO promotion technique:

♦ further theoretical examination of our proposed model under the parameters influencing the information-seeking behavior of those online customers, which use searching engines;

♦ further theoretical examination of our proposed model under the prism of organization's overall marketing planning;

♦ further investigations of our extended model, examining more real-life SEO case studies, are also warmly welcome.

Conclusion

The research aim of the paper was to examine the possibility of an extension of Bedny's theoretical perspective of 'activity' theory as an effective framework for SEO contextual issues, which could be used to aid the design and analysis of SEO promotion technique investigations. This conceptualization was approached as a framework for the elaboration of Search Engine Optimization (SEO) promotion technique. The above discussion allowed us to confirm the: a) degree of answering the research question and the support of the initial assumptions, b) relation of the findings to earlier work, c) theoretical implications, d) practical implications, and e) further research.

Based on the answer of the research question, we can accept the following initial assumptions: a) approaching Bedny's theoretical perspective of activity theory from an online promotion management aspect, the contribution of the conceptualization in promotion management can be approached as a framework for SEO online promotion technique, b) SEO's objective is to increase web visitor counts by ranking an organization's web site very high as a result of searches using the most appropriate keywords describing the promotion offer through a web site. Therefore, effective SEO promotion technique can result in higher sales and greater revenues.

If any type of organization plans to use internet marketing to be recognizable and boost sales of the offered solutions online, it is necessary to know a great deal about how SEO, an innovative online promotion technique, can work more effectively and efficiently.

Search engines seem to be one of the most dynamic marketing newest online promotion channels, as they are a prime source for getting more and more online customers. There was a significant literature in information research on constructs, such as activity theory and tools for activity systems. In contrast, activity system constructs, such as "subject", "object" and "goal statement", were relatively unexplored. No study, till now, has offered a new perspective for promotion managers of an online promotion technique, such as the SEO, based on Bedny's theoretical perspective of activity theory and especially regarding the critical role of the elements of *subject, tool, object, goal* and *result* through an *SEO activity system.*

Our organized literature review has led us to an initial judgmental sample of fifty-five (55) published research works (selected at the first stage of the literature review), in order to be scanned and reached at one to thirty (30) published research works, which were processed to offer some valuable findings. Our research intention was to categorize the constructs of the following fundamental concept: "behavioristic framework for the elaboration of SEO promotion technique". Based on the interpretation of the literature review findings, some valuable findings were derived from the critical case analysis of Increase Visibility Inc. with regard to the epistemological approach, we adopted a critical hermeneutic approach.

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