The Future of Extension: Chile's Advice Online Service

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Introduction

Recent years have witnessed a surge in business development services (BDS) offerings online, mostly geared to small and micro enterprise development, many provided under government sponsorship. What is the impact of these "services? It is difficult to tell because practically no monitoring is taking place. With so much duplication it is probable that many of these websites are used infrequently and yield little of practical value.

This paper examines the experience of a promising advice online service developed and supported by Chile's Technical Cooperation Service. SERCOTEC is Chile's agency charged with promoting the development of the country's micro and small enterprises. SERCOTEC's web portal, Redsercotec (www.redsercotec.cl), supports the agency's mainstream activities through the online provision of services and information to the agency's clients.

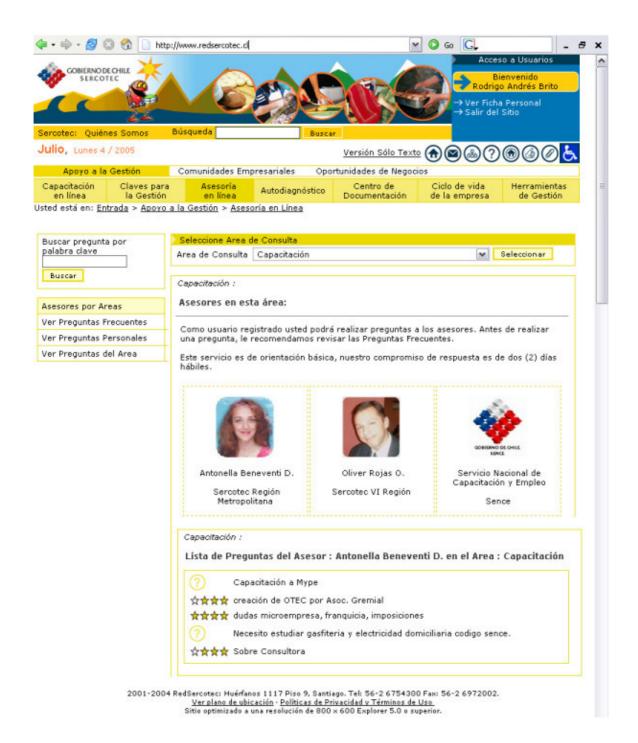
SERCOTEC's experience with advice online stands apart from other online BDS initiatives. First, Redsercotec is a public service provided at no charge to small and microentrepreneurs. Second, it is directed to serve not just a narrowly defined group (e.g. farmers) but all of Chile's small entrepreneurs with a broad range of interests and needs for information and services (e.g. legal advice, training, entrepreneurship, information on specific sectors like agriculture). Third, to be able to meet a broad range of interests, SERCOTEC has partnered with many other institutions to provide expert advice. This exemplifies an effective use by the public sector of the low-cost networking power of the Internet. Fourth, the system has been operational since March 2002 and was upgraded in 2004, and SERCOTEC thus has had time to garner experience. Through trial and error and careful monitoring, the agency has drawn on this experience to increase reach and effectiveness. Fifth and most importantly, the system is low cost, easy to implement and requires low maintenance. It has significant potential for replication elsewhere, to help public agencies increase their reach and become more citizen-oriented, transparent, and accountable at reasonably low cost, provided minimum conditions of literacy, a single language and access to ICTs apply.

How the system Works

Users registered in the site may send specific queries to any one of about 90 specialists (57 SERCOTEC staff members plus those of 29 partner public and private institutions) covering 45 thematic areas. For each advice category, the site gives the user a choice of several specialists, showing for each of them his or her picture, location, summary curriculum vitae, a record of the questions that the specialist has previously received and answered, and of the ratings that previous users have given to each response. An answer to each query is given within 48 hours. Upon receiving the advisor's reply, users are invited to rate the response on a 4-level scale from excellent to unsatisfactory.

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When the system was started it relied exclusively on SERCOTEC's staff, but soon was expanded by adding advisors through partnerships with other institutions. Partner advisors participate in the service at no cost to SERCOTEC. Three types of partnership arrangements are used: i. Formal Agreement of Collaboration between SERCOTEC and the partner organization; ii. Letter of intent between both parties; and iii. Word of mouth agreement, used occasionally in the case of highly qualified professionals with no formal institutional links but who offer to collaborate on a voluntary basis.

Sample Question and Answer – Agriculture and Livestock 18 June 2004 Ouery

Question:

Greetings Dear Pedro,

The information you gave me last time has been quite useful, thank you.

A new doubt arose for which I have been looking for an answer but that I have not been able to resolve. This is why I take the liberty to ask you, to see if you can get a response.

Oregano oil is not sold in its pure state, but mixed with other oils (e.g. olive) in a 40% to 60% or 50% to 50% ratio. Why is this? Is it that pure oil is not feasible?

Sincerely,

Segundo Henriquez

Answer:

Mr. Henriquez

From what I have been able to find out, the reason behind the mixture is that when pure oregano oil is used on the skin or directly ingested it will most likely cause burs or strong irritation. AS you probably know oregano oil is a very powerful disinfectant, which eliminates fungus, bacteria, microbes and even viruses, and is also used to disinfect surfaces. Furthermore, it has anti-inflammatory properties and regulates digestion. For these reasons, it is commonly used mixed with other more neutral oils, generally extra-virgin olive oil.

Sincerely yours,

Rodrigo Salinas O. SITEC R. M.

Presently there are 57 SERCOTEC staff advisors supporting the system, complemented by advisors from twenty nine private, public and academic organizations (Table 1 lists the 25 active in 2005). Sometimes a partner will assume responsibility for providing the advice as an agency. In other instances individual experts within a partner organization are chosen. From a user's perspective, SERCOTEC's partnerships mean a comprehensive service, with more thematic options from which to choose. A user may for example direct his agriculture related query to a SERCOTEC agriculture specialist, or, if he prefers, to the National Institute of Agricultural Development (INDAP).

The system is user friendly with individualized interfaces for both advisors and registered users. Communication with advisors and users is via email. Whenever a query is directed to an advisor, the system sends an email to inform her. Whenever a user's query has been answered he is notified and directed to look for his answer in the Redsercotec portal. The system includes a feature that makes it easy for advisors to convert repeat questions into frequently asked questions that are useful for general reference.

Intellectual property rights are respected. An advisor will generally pass on information that he is familiar with based on his experience and expertise. He may also refer the user to a site or source where he may purchase more detailed information or reports.

Table 1. Partner Agencies Providing Advisors to Support Redsercotec Online Service

Institution*	Public	Private	Academic
National Institute of Ag. Dev. (INDAP)	X		
Chilean Handicrafts Export Org. – Comparte		Х	
Legal Program – University of Chile			Х
Associations of Chile	X		
National Training and Employment Service – Sence	X		
Export Promotion Agency – ProChile	X		
e-Procurement (Chile Compra)	Х		
Cooperatives Department – Min. Economy	Х		
Dep. of Industrial Property – Min. Economy	X		
BancoEstado	Х		
Banco de Desarrollo		X	
Banefe (commercial bank)		X	
Consultora B&S (consultancy firm)		X	
Subscretariat for Regional Development – Subdere	X		
National Statistics Institute – INE	X		
U. Santiago de Chile SME Program - Apyme-Usach			X
Natural Resources Information Center – CIREN	X		
Center for Dev. of Technologies for the Environment -Cedetema – U. Tecnológica			X
National Environment Commission – Conama	Х		
National Institute of Norms – INN	X		
Labor Directorate	X		
Mutual Seguridad (Employment Risk Mgmt.)		Х	
Inst. Normalización Previsional – INP (Soc. Sec.)	X		
National Tourism Service – Sernatur	X		
International University SEK			x

^{*}Includes only institutions whose advisors were queried during the period July 2004-May 2005.

Anyone visiting the portal can view all questions and answers posted. Entrepreneurs wishing confidential consultation – e.g. an entrepreneur exploring a new market who may not want to share his explorations with potential competitors – may always visit SERCOTEC offices or a partner agency directly.

SERCOTEC has developed a number of manuals and procedural guidelines. An example is a set of guidelines that help orient participating advisors regarding the system and operating procedures. The system is partly written in open source code and partly in proprietary software (i.e. Cold Fusion and Breeze for e-learning).

The system operates on 48 hour response. If a particular advisor is unable to answer within the 48-hour period, (e.g. because of illness or vacation), SERCOTEC's Content Editor redirects the query to another qualified advisor.

Up to now, the personalized query system has not become a burden. The additional work load per advisor seldom exceeds answering three queries per day, and the total number of gueries for the entire system is perhaps 10 a day.

A key to success is the selection of qualified professional advisors. Poor advisors with poor ratings could undermine credibility of the system, and create potentially compromising situations for the System's managers and for the advisors.

Monitoring and Evaluation

To submit a query users first need to register in the system. Registration enables Redsercotec to better know its online clients. At end of May 2005, there were a total of 29,187 registered users (Table 2), from 330 of the country's 350 *comunas*. Thirty percent of these were from the metropolitan area, Santiago, where 40% of the country's population lives; 68% were from generally poorer *communas* outside the capital. A third of registered users were women. Nearly 40 percent were entrepreneurs and 45% were would-be entrepreneurs.

Table 2. Distribution of Registered Users of Redsercotec by Entrepreneurial Status, Residence and Gender (May 2005)

_	Male		Female		Total	
	No.	% male	No.	% female	No.	% of total
entrepreneurs	7,480	67	3,602	33	11,082	38.0
aspiring entrep.	8,948	67	4,367	33	13,315	45.6
other	2,964	62	1,826	38	4,790	16.4
Total	19,392		9,795		29,187	100.0
Metropolitan Region	6,043	68	2,854	32	8,897	30.5
Regions I – XII	13,035	66	6,835	34	19,870	68.1
foreigners	314	75	106	25	420	1.4
Total	19,392		9,795		29,187	100.0

Only about a third of users evaluate the responses they receive. Table 3 lists all of topics presently serviced, showing first those with higher number of queries, and presents the ratings given to answers by topic. From the time that user evaluations were introduced in mid-2004 to the end of May 2005, 53% of the responses have been rated excellent; 33% satisfactory, 8.5% weak and 5.6% weak.

Monitoring of user behavior and satisfaction with the services provided is an integral part of the system. User registration helps SERCOTEC keep its clients informed of important materials, services and events through a monthly newsletter, and tailor services to meet their needs. User feedback increases transparency and enables SERCOTEC to monitor the individual competence of advisors and the overall quality of the advice imparted. It also serves as a powerful self-regulating quality control mechanism. No advisor likes to see his advice questioned or ranked poorly in public by a user. Since users vary in expertise and experience (e.g. questions from a student may require a different answer or approach than those coming from an experienced professional) SERCOTEC is planning to introduce registered user profiles that will give advisors more information about users seeking their advice.

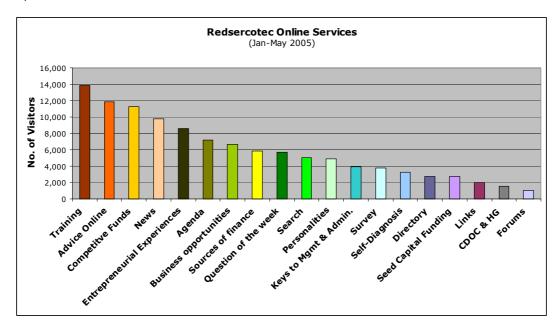
Table 3. User Evaluations of Advice Online Service Responses (July 2004 - May 2005)

	User Ratings				No. of questions	
Thematic Area	Excellent	Satisf.	Weak	Unsatisf.	Answered	Evaluated
Taxation	21	7	2	1	88	31
Agriculture	13	13	4	3	86	33
Legal Advice	22	6	1	2	71	31
Entrepreneurship	11	3	2	0	52	16
Tourism	3	5	0	0	24	8
Enterprise Formation	6	4	0	0	23	10
Artisanry	1	2	0	1	22	4
External Trade	1	3	2	2	22	8
Project Evaluation	3	3	1	0	22	7
Enterprise Management	4	3	1	2	22	10
Labor legislation	5	0	1	0	16	6
Aquaculture	1	1	0	0	14	2
Costs	0	1	0	1	14	2
Financing and Credit	1	1	3	1	14	6
Technology	3	1	1	0	14	5
Seed Capital Grant	3	1	0	0	13	4
Environment	4	0	0	0	13	4
Promotion incentives	1	0	0	0	11	1
Associations	1	1	0	0	10	2
Training	0	2	2	0	10	4
Marketing	1	3	0	0	10	4
Trades and Fairs	0	2	0	0	10	2
Strategic Plan. & Oper. Dev.	2	3	0	0	10	5
Commerce	1	1	0	0	9	2
Financial Management	0	2	0	0	7	2
Marketing	5	1	0	0	6	6
Family Micro enterprise Law	1	0	0	0	6	1
Norms and Standards	0	0	0	0	6	0
Culture and heritage	1	2	0	0	6	3
Local Development Mgmt.	1	1	0	0	5	2
Informatics	0	0	0	0	5	0
Risk prevention	0	0	0	0	5	0
Labor Organizations	2	0	0	0	4	2
Wood Industry	2	1	0	0	4	3
Artisan fisheries	1	2	0	0	4	3
Industrial Property	1	0	0	0	4	1
Quality Control	0	1	0	0	3	1
Human Resources	1	1	0	0	3	2
Regional Development	1	0	0	0	2	1
Statistics	0	0	0	0	2	0
Telecenters	0	0	0	0	2	0
State Purchases	0	0	0	0	1	0
Cooperatives	0	0	0	0	1	0
Natural Resources	0	0	0	0	1	0
Information		0		0	1	
Industrial Parks	0	0	0	0	1	0
TOTAL	124	77	20	13	678	234

Other Redsercotec Services

Advice online is the focus of this study and is one of Redsercotec's more popular services (second in popularity between January – May 2005), but it is not the only one. The charge below shows the full range of services provided and the number of visits to each service in January - May 2005.

All online services are well integrated to SERCOTEC's mainstream activities. Training modules turned out to be more popular than advice online in January-May 2005, mainly because SERCOTEC has been running training courses in all of its offices and these make use of training materials made available online at the Redsercotec portal. The advice online service similarly supports other activities, as advisors recommend other parts of the site, and other online and face to face SERCOTEC activities.



The site also gives access to valuable tools created by partners from other countries. A Self Assessment test enabling a user to determine his own capacity to become a small entrepreneur was made available by Spanish cooperation (GIPE, Gabinete de Iniciativas Para el Empleo y Universidad de Alicante). An Auto-diagnostic system developed in Mexico helps an entrepreneur identify her weaknesses and take corrective action.

Costs and Benefits

The design and development of the latest version of the Redsercotec portal was outsourced at a total cost of US\$ 60,000. This includes approximately US\$ 8,000 in software licenses. The entire system (which includes Advice Online as well as the other services) is run by a Unit Chief, a Content Manger and a Webmaster. In addition to staff salaries, running cash costs amounted to US\$ 52,000 in the first two years of operation and US\$ 35,000 in the third. Operating costs are marginal with respect to SERCOTEC's overall annual operating budget of US\$ 16 million (in 2004).

The opportunity cost of advisors is not large, considering that they choose themselves when to answer the queries within the 48 hour period given. Each advisor allocates her own time to answer and it is unlikely that she will dedicate time to respond online when she has to attend pressing matters of high value. Further, many of the questions are not particularly difficult to answer, either because the answer is readily available (even within other parts of the Redsercotec's portal or through an experienced online search), or at times simply because what a small or aspiring entrepreneur is looking for is a gentle guiding hand before they embark on a new undertaking that is challenging and important to them.

The cost of advisors to participating agencies is often more than compensated for the advertising value, prestige or personal satisfaction that comes with supporting the system. This does not mean that there is no cost involved; simply that there is an exchange in value that occurs that benefits everyone without involving the actual transfer of money. For example, some of the more difficult questions have been addressed to the legal clinic of the University of Chile. The students who serve as advisors benefit from practicing law in a real world context. The university and the professor who runs the clinic and supervises every answer also benefit from the advertising, recognition and public good will earned as a result of providing a valuable public service.

SERCOTEC's advice online system is appreciated and frequently used by its clientele. Since it was instituted in 2002 to November 2004, a total of 5,500 questions were submitted by users and answered through the system. Since the evaluation of responses started in July 2004 through 31 May 2005, 678 questions have been asked and answered and 234 have been evaluated by users mostly (86%) ranked either satisfactorily or better. From mid 2002 through May 2005, the number of visits to the advice online service section was 189,094, which represents 19% of the total number of visits (971,852) to the Redsercotec portal during this period.

The advice online system has helped improved the effectiveness of SERCOTEC's mainstream operations. The advice online system, for example, is currently being used to answer queries in relation to a new SERCOTEC program that enables users to apply online to seed capital grants that finance small entrepreneurial initiatives. There has also been an observable increase in the interaction between SERCOTEC's staff, as advisors seek help from one another in responding online queries.

The use of the Internet has also helped expand SERCOTEC's overall reach. The regular clientele benefiting from ordinary activities of the agency number about 10,000, compared to nearly 30,000 registered users of Redsercotec.

Is the System Transferable?

The provision of personalized advice online, where users determine the kind of information they need and interact directly with advisors, is a promising emergent application world wide. Advice is available for a fee from Google Answers (http://answers.google.com/answers/), presently at US\$ 2.50/query. Provision of agricultural extension advice online services is also being experimented with in India, by the International Institute of Information Technology, Hyderabad, (http://agriculture.iiit.net/agrids/); and by the Indian Institute for Technology, Madras, and n-logue Communications, in the latter case using videoconferencing technology to a network of about 2,400 village kiosks (www.n-logue.com/services.htm).

Some basic conditions must be met before systems like Redsercotec's advice online can be effective. The system is practicable in countries where literacy is widespread and a single language is common – e.g. most of Latin America, the Caribbean and large countries like China, and Indonesia. It would be harder to implement in countries with multiple languages or where illiteracy is a major challenge (e.g. India, many countries in Africa). A minimum number of existing or aspiring entrepreneurs with access to and familiar with the use of computers and the Internet is also an important prerequisite.

Once these basic conditions are met implementation of the system depends on public service leadership. The United Arab Emirates Ministry of Agriculture and Fisheries launched its own advice online system in March 2004 (http://uae.gov.ae/uaeagricent/AskQ/ask you question eng.htm).



As of May 2005 the UAE system's 5 advisors had answered over 700 questions. Subsequently, as a result of a videoconference between FAO, UAE specialists visiting Rome, and SERCOTEC Management, cooperation has enabled the UAE to profit from Chile's experience. Some of the features UAE officials hope to adapt to local conditions are: the expansion to serve other entrepreneurial needs not just those of farming, the establishment of partnerships with universities and other public and private institutions, and the implementation of user evaluation of responses.

Concluding Remarks

The questions received through the advice online service are real felt needs of SERCOTEC's target audience and constitute a wealth of information that the agency is only beginning to exploit to design new programs, online content, and personalized services. It provides an increasingly important link between the demand and the provision of personalized public services on a massive scale.

Consider also the system's impact on public service incentives and the implications for public agency efficiency, accountability and transparency. Imagine you are a public servant and that every question you are asked, you are obliged to answer within 48 hours, in the understanding that your response will be placed on record identifying you as the author, and made available for everyone in the world to read. Furthermore, consider that the quality of your response will be immediately evaluated by the user and that this user's feedback will be known to your supervisor and your institutional partners and published next to your name.