

THE FIRST INVESTIGATION OF THE MAP USERS IN CHINA

Zhu Guorui Wang Jianhua
 Wu Han Technology University of Surveying and Mapping
 Department of Cartography, China

[Abstract]: In this paper, on the basis of the social investigation for the map users among the China, the basic situations of using maps for map users have been analysed, and the critical remarks on the shortcomings of the present maps and beneficial suggestions about their improvement which come from the map users have been summarised. Authors expect that the references for the departments of map management and mapping can be offered.

[Keyword]: map users investigation.

1. Introduction.

The map has close connection with the national economic construction, environment improvement, natural resources development, culture and education, social activities and so on. In recent years, the cartographic cause of China has largely being developed. According to the statistics, there are 9 national and provincial Special Map Publishers and another more than 30 publishing houses undertaking the map selling business at present in China. More than 2000 sorts of maps and 18 hundred millions volumes of maps have been turn out in the last 40 years. More than 180 volumes of various kinds have been published in recent 10 years, among which the maps and image materials covering over three millions square kilometers have been supplied for the soil investigation, and the maps covering more than one million square kilometers have been provided for the forestry surveying. The large scale maps covering over 200 thousands square kilometers have been produced for the urban and rural construction and economic development. Those accomplishments serve as surveying and mapping guarantee to over 1200 major projects across the country. The map play more and more important roles in the national economic construction.

In order to acquire the following information, namely, the present social possession of maps, the conditions of using maps, the demand on the maps, the major aspect and tendency of maps in need and so on, the first national investigation of the map users have been conducted under the leadership of the National Bureau of Surveying and Mapping.

2. The conditions on the map users investigation.

The map users investigation has been performed in the way of random sampling and typical sampling, distributing questionnaires, holding symposium and inquiring typical map users. The form of the questionnaire as following:

name	age	educational level	occupation
------	-----	-------------------	------------

In your opinions, please mark the sign "v" under corresponding position.

(1). Do you have used maps in your work?

A. always use. B. occasionally use. C. never use.

(2). What sorts of map do you use in your work?

A. topographic map. B. geographic map. C. the map connected with your profession.
 D. another map.

- (3). What problems do you solve for using maps?
 A.inquiry. B.plann. C.design. D.management
 E.research economic conditions. F.measure data. G.another.
- (4). Do you satisfy with the present map?
 A.very satisfaction. B. satisfaction. C.not satisfaction.
- (5).What sorts of the map do you possess?
 A.touring map. B.atlas. C.wall map. D.professional map.
 E.another map. F.no map.
- (6).Have you used the map or not in your daily life?
 A.yes. B. no.
- (7). Why do you never use map or not always use map?
 A.no map. B.don't need. C.don't know how to use map.
- (8).If you have another critical remarks on the shortcomings of the present maps and benifical suggestions, or typical examples of using maps and so on, please write it out.

During the random sampling, we distribute the questionnaires among the country, but the typical sampling has been performed among the province HuBei,China. More than 1400 questionnaires have been distributed among the country during the random sampling, and 876 copies of questionnaires have been retrieved,meanwhile some opinions from symposiums have been recorded, and materials of the sampling inquiring have been collected. The departments that are investigated involve as following, namely,the agriculture,the forestry, the stock raising,the water conservancy,the communications, the coal, the seveying and exploration,the land,the finance,the cultural education,the inviroment protection and the service etc.The occupations of people who are investigated relate to the worker, the peasant, the intellectual, the cadre and the student etc.The age of persons who are investigated involve all adult. Statistics figure has been drawn (view table 1.) on the basis of analysis and summarizing for the investigation.

Table 1. The statistic figure of the map users investigation

items	index classification	object	cultural level				age					occupations				
			graduate or higher	college	high school	middle school	unde- finition	>60	51-60	41-50	<40	unde- finition	cadre	scient.ffc worker	service	another
the conditions of using map in work	always use		173	31	100	121	11	3	112	131	130	3	155	116	38	50
	occasional use		171	122	131	127	18		84	139	144	1	208	55	86	122
	never use		3	3	7	3		3	3	3	2		1	7	5	5
the sorts of using map in work	topographic map		153	30	80	110	3	2	98	148	127	1	183	94	50	50
	geographic map		165	37	112	8	10	2	115	136	127	4	177	30	65	72
	professional map		142	75	74	51	6	6	82	95	117	3	110	113	33	47
	another map		93	50	74	20	12	2	74	85	95	2	94	64	45	56
the solved problems of using map	inquiry		217	135	178	27	18	3	141	181	246	4	267	104	86	118
	plan		69	47	34	2	1	3	58	60	43	1	24	85	10	4
	design		73	19	23	4	4	4	44	53	36	2	32	73	9	9
	manage		73	26	32	1	2	3	43	63	26	2	68	47	14	8
	study economy		53	44	23				27	53	44	1	74	21	20	10
	measure data		82	39	20	5	7	2	54	48	62	4	51	77	20	22
	another		95	48	43	12	10	2	19	39	51	2	66	48	53	46
the satisfaction with the present map	very satisfaction		40	28	49	4	4	1	29	32	63	1	45	27	26	28
	satisfaction		262	175	167	40	22	5	163	234	260	5	296	129	124	136
	not satisfaction		72	14	35	1		2	11	13	59	1	19	22	9	13
the sorts of personal possessing map	travelling map		253	143	145	23	21	2	147	176	239	3	228	122	101	139
	atlas		254	144	130	24	13	5	137	201	241	5	275	123	78	84
	wall map		129	65	93	10	2	4	80	96	112	4	143	66	57	46
	professional map		115	53	49	1	4	5	55	69	78	2	72	91	18	28
	another map		68	29	24	10	8	4	49	40	42	1	41	50	23	23
	no map		4	9	15	3	1	1		8	23		11	6	10	6
the conditions of using map in daily life	have used		310	213	245	37	24	6	96	265	355	7	356	168	146	159
	no used		4	5	28	10	2	2	7	11	27		6	10	8	18
cause of no using map or seldom using map	no map		20	18	23	7	2	1	17	13	43	2	35	6	12	17
	not need		35	10	42	30	14	3	40	46	108		52	28	46	69
	don't know how to use		6								6		2			4
the numbers of investigated person			214	213	271	47	26	8	203	276	382	7	362	178	159	177

3. The discussion of the investigating result.

3.1. 876 copies of questionnaires have been retrieved, among which 314 (its ration is up to 35.8%) of persons have the graduate or higher educational level, and 24.9% of person have the college educational level. So these persons who are investigated have been good educated. From the condition of age, 75.1% of persons are less than 50, and they are the mainstay in all professions at present. From the view on sorts of occupations, most of them are the scientific workers, the government cadres, the teachers, the communication and the social service workers, the peasants and the students etc.

3.2 The conditions of using maps in work.

The cultural level is the most important fact. All people who have the graduate or higher educational level have being used maps in their work or daily life, and the ration that they always use maps is up to 55%. Only 2% of those people who have the college educational level don't use maps, but the ration of always using maps is up to 42%. 30% of those people who have the middle or lower educational level often use maps in their work. Another more important fact is the age. And 87% of those people who are less than 50 always use maps. According to the conditions of profession, almost all cadres and scientific workers use maps, and 65.2% of scientific workers always use maps in their work.

3.3. The sorts of using maps.

The cadres and scientific workers are often use the topographic map, and not only their purpose of using map are for simply inquiry, but also are for professional activity. According to the statistic figure we can get the conclusion that the wall map, the fashional map and professional map, especially travelling map are of more potentialities.

3.4. The solved problems by using maps.

65.4% of people who use maps are mainly for the inquiring purpose, but the ration can be changed with the increasing of age and different profession. The older they are, the less the ration of their purpose only for the inquiring decrease, but the rations that they use maps for the planning, management and measure data etc are increasing. According to the conditions of occupation, the purpose of scientific workers and cadres using maps are mainly for the professional activities.

3.5. The satisfaction with the present maps.

Most of people who have different education level, different ages and different occupations think that they are usually satisfaction with the present maps, but a few people don't satisfy with the present maps. It shows that the present maps could content with the need of the people, but on the other hand, the potentialities of the maps are still to be developed, especially for enlarging the fields of using maps and enforcing the management of the map market.

3.6 The conditions of person possessing maps.

Only 3.6% of people who are investigated haven't maps, this ration is not so high, it shows that the maps are so popularization in China. 62.4% of people have the travelling maps and the atlases, and it shows that the travelling maps have a widely market. Secondly, the higher their educational level they are, the more they possess maps. According to the occupations, the cadres and the scientific workers possess more private maps.

3.7. The investigation results of using maps in daily life shows that the map has very close connection with the daily life, and only 4.8% of persons who are investigated don't use maps in their daily life.

3.8. As to the cause of never using maps or seldom using maps, which about 25% of people have no maps, and 67% of people don't need maps, only 2% of people don't know how to use maps. It shows that some people don't understand the power of the map and its using way. Meanwhile it explains that the purpose of most people using maps are mainly for inquiring.

3.9. In order to identify the reliability that come from the investigation results among the country, the typical sampling investigation has been conducted in Hu Bei province, and the statistic results are agreement with that among the country.

4. The critical remarks and suggestions of the map users.

4.1. The current of the map is so bad.

The renewal of the map can't agree with the change of the economic development, many changes, for example, the rail way, the high way, the city and town, and the place name etc, can't be expressed timely on the maps, so it results in many mistakes for the map users, and almost all people have offered this critical remarks.

4.2. The periods of the map publishing are so long, and the sorts of maps are so little. Almost maps that can be seen on the market are travelling map and communication maps, and the forms of maps hardly have any changed. Many map users suggest that new sorts of map should be produced, and from the express, media to the design and the decoration must be renewed. Meanwhile, the electronic map will become more and more important with the development of the economy.

4.3. The contents of maps should be expressed detaily, so that the information of the map can be increased. Taking districts map as an example, on which the natural source, the enterprise, and main conditions of economy should be expressed. The mileage data should be marked on the communication maps. How to pass city, especially biggest city, in the shortest way, should be expressed on the city map. The map users also offer many suggestions on the standardization of the map and some new sorts of maps.

4.4. The different rank roads are expressed in the same sign on the communication maps, in which map users result mistaking selection, especially for the drivers. Therefore, the map users suggest that the classifications of roads should be classified according to the need of drive.

4.5. In order to content the need with the economic construction, the contents of the map must be further researched, many factors that have the connection with the economic construction and engineering design should be expressed on the maps, for example, the height of the high-tension line tower, the preservation area of cultural relics on or under ground, and the depth of the wide water area etc. In addition, the digital maps are imperatively needed in the communication seveying and design and the electrical communication management.

4.6. The departments of map management should take an effective action, so that the production of map, the share of materials and the selling of maps ect can be effectively managed.

5. Conclusion.

The first investigation of the map users involves varieties provinces and different occupations, different ages and different ranks users, and the contents of investigation involves varieties aspects of using maps. Therefore, the real situations of using maps and the opinions of the map users can be shown by the results of the investigation and the analysed conclusions. In a word, the present maps can satisfy the need of the social economy and daily life. But on the other hand, some existing problems of the present map business, even some problems that are imperatively

solved , can be found. Therefore, the departments of map management and the department of mapping should attach it important to some critical remarks and suggestions that map users offer, and some beinfical suggestions should be fedback and applied into the procedure of mapping, publishing and selling. In this way, we can make it possible that the map better serve for the economic construction and social life.