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Participatory Action Research into Low Literates' Medical Needs in Rural Communities

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Abstract

This paper describes initial, exploratory fieldwork carried out at Hantun village in Henan Province, China by a Royal College of Art research student in April 2018. It focuses on low literates' medical issues – the prescription and taking of medicines as prescribed – and is divided into three:

Stage 1: Initial exploration of work: interviews with doctors, survey of patients and participant observations;

Stage 2: Reflective and reflexive observations and interviews, plus the participant workshop with low-literate villagers;

Stage 3: Evaluating the participatory design.

The aim of this stage of the research journey was to collect primary data, understand the behaviour of the core data set – their needs, desires, habits, perceptions and unique cognitive strategies in terms of use of visual elements – and identify problems within the context of healthcare in Hantun. What might be the system of public health advocacy and how does government – local and provincial – as well as public and private health services manage key issues? More importantly, this paper addresses the examination of design theory and evaluation of research methodology. It shows how participatory research methods may contribute to answering research questions and lead to the next research stage.

Keywords: Medical Needs; Rural Communities; Henan Province; Health Services.

1. Introduction

UNESCO (2006: 148) defines literacy in terms of neutral access to and neutral ability with written data: "The most common understanding of literacy is that it is a set of tangible skills – particularly the cognitive skills of reading and writing – that are independent of the context in which they are acquired and the background of the person who acquires them" [1]. Illiteracy is defined in terms of having little or no access to or use of written data and more closely defined by a division into three typologies. The first is those people who cannot read and write – perhaps the most universal of all literacy measures. If literacy/illiteracy were mapped onto a spectrum – shading illiteracy through various nuances of use – then the first type would exist closer to the extreme of total illiteracy. This may be a conceptual rather than a real point at the end of the spectrum. The second type would be further out from that extreme and be someone who cannot recognise modern social symbols in common or everyday use such as maps or graphs. The third type is someone who cannot use complex technological tools such as computers to learn, communicate or manage needs (United Nations 2010) [2]. The second and third types are called functional illiterates. UNESCO (2013: Annex 1/1) stresses the concept of literacy as "essentially related to written language as a means of communication and is seen as a continuum of skills, from the basic to the most advanced, acquired throughout a lifetime" [3].

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The government of the People's Republic of China also seeks to define various "standards of literacy" that seem more class related: a literate farmer is one who can read 1500 words, while workers or employees and other urban residents have passed the bar if they can read 2000 words and thereby simple newspaper articles, can keep accounts and write simply. According to the provincial definition by the ChongQing Education Council (2009) those who cannot count, understand or use computers, and who cannot obey traffic lights are among the new illiterates [4]. These latter definitions conflate different cognitive abilities and may create more confusion than clarity.

These three types lie, therefore, on this continuum but are dynamically interrelated, a concept elaborated by Finnegan (1988) who considers "modes" of literacy that rely on the ways different media are read and used [5]. My Chinese character experiment so far mainly targets cognitive illiteracy, functional illiteracy slightly permeated in it. My method has potential study value in terms of typefaces, icons, images and pictographs being different branches of visual communication. This was an attempt for typography to be better integrated with other visual elements and thus make typefaces more legible and acceptable. This could expand the typeface beyond its original function, contributing to other fields such as visual signs and instruction design, which facilitate low literacy cognition. Low literacy is defined by the researcher, following Cottingham and Archer (1996), as having some basic skills in recognising words and similarly limited skills in reproducing them. Mandarin and its unique base of 3,000 separate Chinese characters may create the need for a redefinition of the Freirean literacy scale [6].

2. A Brief Review of Participatory Design

From the Workplace Democracy Movement to information technology, a development involving many design disciplines.

Contemporary participatory design originated from Scandinavia in the 1970s and the social, political and civil rights movements of the 1960s directly provided a fertile medium. Some researchers and designers then started to explore how such democratic movements might relate to their practices. Academic research generated collaboration with trades unions to empower workers' democracy and to encourage workers to determine the shape and scope of new technologies introduced into their workplace. Pioneering work by Kristen Nygard and the Norwegian Metal Workers' union was a preliminary move from traditional research to working with junior staff: leading projects such as UTOPIA and DEMOS are examples from this period. The UTOPIA project generalised from experience-based design methods, and developed through a focus on hands-on experiences, emphasizing the need for technical and organizational alternatives [7]. The workplace democracy movement in Scandinavia not only raised questions of democracy, power and control at European workplaces but also has had a profound effect in the participatory design field, an effect that has been multiplied by the introduction of other research methods in other design fields. Followed by this movement, some Europeans and American researchers began to explore how the Scandinavian experience could be adapted and expanded into other possible fields. One example is the user-centred approach to participatory design in the US. User-centred design – created by Don Norman in the 1980s – emphasises a user's needs as well as product usefulness and usability. This has proved to be another milestone for the design industry. User-centred design helps pave the way towards participatory design, a typically American brand of pragmatic system design. Changing from user-centred to participatory design is a paradigm shift from designing *for* users to designing *with* users: many researchers maintain the importance of the participatory design movement [8]. Designers of earlier participatory design – rooted in the human-computer interaction field – tried to deploy mutual learning process methods into other design fields. Today, participatory design is a well-established area of research and an important practice across many design disciplines such as product design, architecture design, graphic design, service design, social innovation design, community design and even social science and commercial projects [9].

3. Research Methodology

3.1. Initial Exploration of Work – *Linking ethnography with design anthropology*

Understanding the social and cultural context is critical to almost any researcher embarking on a project. This means, firstly, acknowledging the unique context of Hantun village in Henan Province – a small, semi-isolated rural community of 300 people or fewer, reliant on agriculture and remittances from family members working in big cities – and the larger town of Huji with a population of about 3,000. In both places it is clear that the demographics are skewed, with few people under 60 or over 18. In 2018 this pattern is common across rural China. Children may be left behind to be looked after by grandparents or extended family. The researcher's family link to the community is profound and allows an ethnographic approach to fieldwork to proceed. Ethnography is a strategic key to open the culturally unique properties of Hantun, to understand social experiences which take place in a research field better. In ethnographic fieldwork, observations, interviews, organisational visits and walkthroughs are good initial methods. These formulate first-hand experiences of context, field researchers studying human uses of design to understand the systems of meaning [10].

Though being flexible and sensitive to surroundings – important given the context where the researcher is known and of which he is familiar – one of the main strategies in ethnography, goal setting, is an important starting point for participatory action research: researchers must know what they want to collect specifically and which areas they need to pay closest attention to. Random searching is not effective. Since the researcher was familiar with the complex of low level buildings, its single communal focus that serves as a clinic and meeting place, the temptation to random searching may be greater. With everything being so familiar, the number of entry points for contact were many. From the point of view of design ethnography, researchers should have a clear goal and know where to focus first, then be open to the holistic environment. In this way they are more likely to pick up on interesting details. While the ethnographer is interested in understanding human behaviour as it is reflected in the lifestyles of diverse communities, the designer is interested in designing artefacts that will support the activities of these communities [11]. Therefore, when designers take on the roles of ethnographers during fieldwork, apart from accessing people's daily lives as members of social groups, they need to spend more time evaluating design artefacts and paying attention to participants' user needs. In this way, understanding responses to design artefacts may be more effective and thoughtful.

3.2. Participant Observation in a Local Private Medical Clinic

In this local private medical clinic and its daily activities, the researcher's main inquiry – using observative action – was finding out how doctors give prescriptions to low-literate patients in Hantun village. The clinic was a single room in a basic one storey structure. Patients knew when the doctor would be there and turned up without appointments. One aspect of the clinic that is quite different to any comparator in the EU was the relaxed nature of patients and medical staff – a doctor and nurse. There were no partitions and examinations were swift and took place in full view of those waiting.

What was the prescription format and how did patients respond? First of all, the researcher's aunt acted as gatekeeper, introducing the purpose of the survey to the doctor. The researcher's observative action was agreed by both the doctor and each patient in turn.

It is more likely that, in neighbourhood-based clinics, patients attend for minor illnesses. They know each other well, so the participant observation method works effectively; the researcher continually talked and interacted with patients during each consultation. The main finding through this observation method was that the traditional medicine packing method – called *pentagon packing* – is still widely used in such clinics. This method of packing medicines profoundly affects elderly low literates' personal usage.

Figure 1. Pentagon packing

Pentagon packing is a traditional medicine packing method that has existed for hundreds of years in China. Doctors use recycled paper cut into a square. When they dispense the medicine to patients, they put different pills on the paper according to dosage and usage, then fold the paper five times to seal it. The final shape is a pentagon. Each package is a single dose, usually no more than three packages daily. No matter whether the patient is literate or illiterate, they need not remember the dosage, they simply open a package and take the pills. Normally they do not know the names of the pills inside of the package unless they have asked the doctor (usually they do not bother to ask). This method is deeply rooted in the Chinese traditional sociocultural context and is still used in rural clinics due to its simplicity and comforting familiarity.

3.3. Ethnographic Observation in Public Healthcare Clinic in Huji Town Centre

Huji is a town of 1,000 less than ten kilometres from Hantun. The clinic in Huji is larger than that in its neighbour. There is some small-scale manufacturing – mostly in the form of maintenance – a couple of shops, a school and a government office. The larger scale of the clinic allows for more complex procedures and a range of specialised treatments. A public healthcare clinic in China is not just a treatment centre, it also provides public health advocacy, fundamental health services and a social welfare system. The researcher's aunt – the deputy of this clinic – again acted as doorkeeper. After she had listened to the aim of the action research, she suggested the cardiovascular department as the best place to observe. The main reason is that patients are more senior low literates. Importantly, cardiovascular illness is a common chronic illness, so patients would not care about privacy. The public healthcare clinic is usually a more formal place than a local village clinic: informality might work against participant observation, generating a series of responses that might confuse or distract observation. The researcher might find it hard to maintain neutrality in informal situations.

The waiting area doubles as the consultation room. Patients do not need to book appointments: anyone can walk into the room and wait. This shows another different cultural perspective in comparison to the UK: Chinese patients don't mind about their visit being revealed in public. The researcher used direct observation as the chosen method and never disturbed any diagnosis or conversation and tried to be a "fly on the wall" as ethnography suggests. Data were collected from direct observations and from behaviour that occurs naturally in this clinic. The observer unobtrusively recorded all activities over a series of consultations.

After the patients received their prescriptions from the pharmacy next door to the clinic, they were told to go back to the doctor for instructions on usage. The doctor explained any matters that needed attention – such as whether the medicine was to be taken with or without food, whether they needed to reduce the dosage after a while, and so on. More importantly, the doctor wrote the dosage instructions on the medicine package to make it more obvious. Most low literates can recognize numbers rather than text: they know that the first number refers to the number of pills to be taken, and the second refers to the times the medicine should be taken (The researcher noticed that these handwritten notes could easily be erased or smudged or obscured).

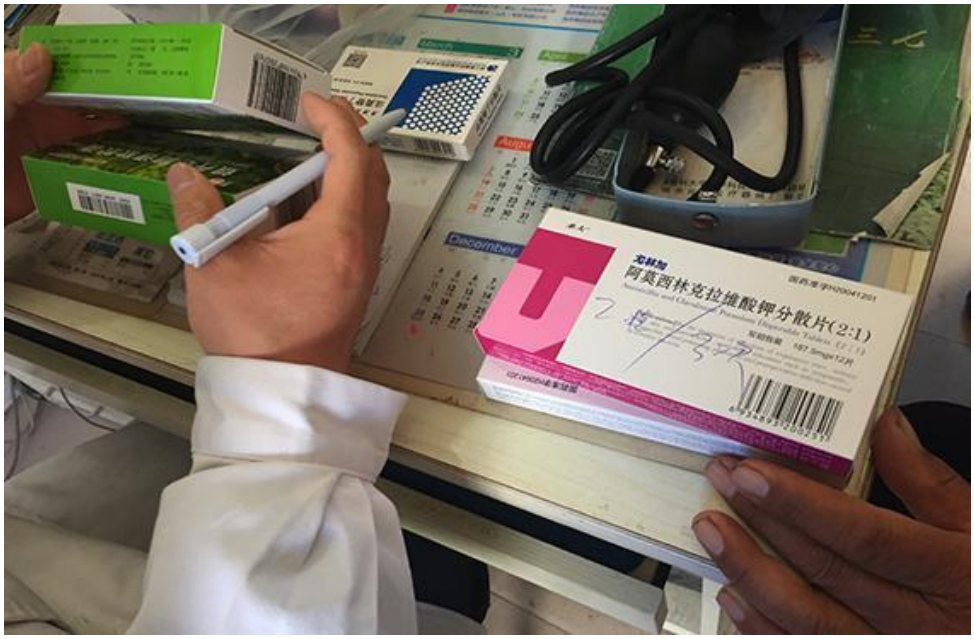

Figure 2. Doctor wrote the dosage instructions

Researcher / doctor interaction occurred when there was no patient. Then the doctor talked through the traditional pentagon packing method, explaining that it has tremendous advantages for those with low literacy: patients can easily

follow the prompts when backed with oral instructions. Large hospitals have stopped using this method, however, not only because it is seen as out of date and less formal, but also because when a patient changes medical practitioner, the new doctors and patients could not work out what had been a largely oral, ad hoc and personalised set of instructions.

Most patients were older, low literates who continued to live independently. Based on this doctor's experience, he mentioned that effective recall of his instructions was not entirely dependent on standards of literacy. Sometimes it was more dependent on their personality and confidence to overcome the difficulty. Overall, patients who felt most confused with their prescription usage and dosage were those who suffered from chronic disease and needed to take many different kinds of medicine. For these people, instructions were far more complex, and patients needed to change prescriptions regularly depending on their medical condition. Those who only took two or three different pills, could easily navigate the process by the appearance of medicine. These observations were confirmed in interviews in the following section.

3.4. Observational Interviews with Low Literates in the village

Observations help provide ethnographers with ways to ask appropriate questions from the point-of-view of the members of the community under study. Observations and informal discussions also follow interviews providing the researcher the opportunity to observe behaviour previously described by interview respondents [11]. Early in the fieldwork, interview strategy can be intentionally unstructured and open-ended to allow participants to talk about their experiences, to help them shape those topics to be discussed.

Other strategies need to be considered before interviews. These include:

- Who to interview;
- Where would be most appropriate to conduct the interview;
- How to select those interviewees whose responses may be richer, leading to collecting data more efficiently and accurately.

The researcher's grandfather knows the community very well. He also knows low literates who take medicine regularly and introduced the researcher to them. This helped to facilitate the research process and build trust between interviewees and the researcher. Resultant interviews could be conducted more smoothly and in greater depth. Conducting an interview in the respondent's environment also benefitted the research: not only were the respondents more likely to feel comfortable in familiar surroundings, but they had access to people and objects that may help them through the interview as it unfolds [11]. When the respondents were talking about how they remembered different dosages for different pills, they guided the researcher to the place where they stored their medicine and showed him the packages and explained their methods. By observing their medicine storing environment, the researcher could understand better their behaviour in terms of taking medicine during their days. They all stored their medicine in the most obvious places to remind them to take it. Typically, medications were stored next to teapots, timers, on living room tables, or on the table next to their beds. Any visitor could see their medications during a visit, and the interviewees did not consider their prescriptions as matters of privacy. This could be explained by the local cultural context: people in rural China often do not see illness as an embarrassing, awkward or unduly personal issue. On the contrary, patients often expect their relatives and friends to visit them during or after an illness, no matter whether in hospital or at their home. Conditions are openly discussed. This suggests that this specific ethical issue generated by fieldwork – concerning privacy and discretion – may not be as delicate a concern for the researcher. There may be other ethical issues yet to be identified.

3.4.1. The Interviews in Hantun

Interview A:

She is a widow of 78 who had worked as an agricultural labourer. She has a low level of very basic literacy. She lives with her daughter-in-law who is also a low literate; her son is working in Shanghai. She bought a mobile phone designed for the elderly, but she always receives calls from her son and never makes a call to him: put simply, she doesn't know how to use the key pad beyond opening and closing a call. She is open and talkative and was happy to engage in the research.

She uses the *pentagon packing method* to distribute and pack her own medicine from boxes. She puts one paper pack into her pocket to carry all day. For lack of heating in winter, she is in the habit of putting her hands into her pockets and this behaviour reminds her to take the medicine during the day, no matter where she is. (This suggests that local meteorological conditions may be one variable affecting medicine taking.)

Figure 3. Interview A

Interview B:

She is a 62 year-old with some pride in her memory. She could remember her medicine dosage clearly from its appearance on both the medicine packages and the pills themselves. For example, the size of the medicine box, or the colours and textures of the pills. Having observed the power of colour for this interviewee, the researcher saw a TV remote control on a table, with different coloured buttons. Nevertheless, the interviewee expressed a similar response to technology as had interviewee A: she said she would never turn the TV on when she is alone at home.

Figure 4. Interview B

Interview C:

He is a widower of 75 who lives by himself and has a low-to-medium level of literacy. Once an agricultural worker he now lives a very simple life helped by those of his extended family still in the village. He could remember the dosage because the number of medicines to take is very few and easily manageable. He never had difficulty taking medicine. The researcher noticed, however, that one of his pills would expire in five months. Calculating his dosage, the interviewee would still be taking these pills after this period. Could this be a serious problem for some medications?

Figure 5. Interview C

Interview D:

She is in her 70s (her age could not be ascertained exactly) and totally illiterate and always forgetful. It is possible that she is experiencing early stages of dementia.

Her husband who is older and literate puts her medicine into six boxes, marked 1, 2, 3 on the boxes representing morning, noon and evening. That is two day's dosage. When she picks one box she takes all the contents at once. The number written on the outside is important, because dosages and types of medicine vary. This method was created by her husband and has now been used for 20 years. It is similar to the pentagon packing method, only the materials have changed, from paper to a container. Observation suggested that the interviewee was now so used to the process it had almost become automatic. Nevertheless, should her forgetfulness increase – perhaps with the onset of dementia – then this system would become useless or worse than useless.

Figure 6. Interview D

4. Reflecting Observations and Interviews and Formatting the Participant Workshop

Jones (1990) suggests that the PARK categories should help guide and articulate research goals using a positive/negative polarity:

- **Preserve** – the data achieved at the present moment is, by virtue of its now-ness, positive;

- **Add** – any elements that could have a positive effect;
- **Remove** – any data achieved now that is negative;
- **Keep out** – any elements that could have a negative effect [12].

This strategy – which perhaps could be, in some circumstances, a highly subjective and subjectivising polarity – may be a positive reflective base for data gained through observations and interviews. Reflecting in this way on observations and interviews helps format generative goals for workshops at the next stage. Reflection-in-action is a robust strategy during participatory action research. It means altering viewpoints and building new conceptualisations. This can be done by experimenting with situations as well as by informing actions as research progresses [13]. By generating new interpretations during research the researcher can perceive both positive and negative sides from the participants' points-of-view. It is a way to build empathy: to think through what members of data sets like and dislike and why. The strategy may also allow the participant researcher to turn negative feelings into positive – or at least productive – responses and encourage data set participants to be motivated for the next stage of engagement and data collection. The strategy suggests the researcher not only collects physical data through interaction with the research environment, but also perceives participants' emotional responses at the same time, thus making participatory contact more active and reactive. Reflection-in-action needs a short period of introspection followed by swift decision making, then the application of any new or updated strategy into the next stage of action research.

Reflections generated by observations and interviews indicated that, apart from traditional pentagon packing, all the other listed methods were needed – such as making extra marks on the package by doctors, relatives or low literates themselves – to remind patients of usage and dosage. Other low literate patients, who may never think about creating their own methods to aid memory and reproduce necessary patterns of action, have to rely on other family members or neighbours. Based on such sets of interactions, the researcher is planning a workshop which could help low literates find their own pathways to recalling complex patterns of taking medicine.

Figure 7. Observing records

How to encourage low literates to participate in this workshop is key, especially for those who have little or no confidence and may frequently feel frustrated. There needs to be some strategy that is both flexible enough to be adapted to different needs and contexts yet strong enough to withstand those adaptations.

4.1. Who Should Participate, Where and When

Choosing an appropriate place and time is essential to any workshop. Such a choice not only affects the data the researcher collects, but also the initiative levels and willingness of participants. It was decided that the site of the workshop should be a local shop in Hantun village: this is a microcosm of local community life, a social space where villagers frequently gather for a range of social activities such as chatting, knitting or playing poker after lunch. This workshop was conducted in the afternoon, so people would feel there was an organic and natural reason for its location and for the activity it contained. Participants would have more free time to socialise and feel more relaxed at this time, the workshop could therefore establish a natural sense of informality and encourage interaction.

4.2. Learning Process and Learning Methods

What they learnt and how they learnt it are other stimuli that could affect the quality of a participatory workshop. Mutual learning should be considered carefully during the goal setting. This addresses the importance of the reciprocal transformation processes, and every participant researcher needs to think about this reciprocal process before they plan to participant action research: how does this reciprocal learning process transform the environment and the people and weave them into participant action? This may contribute to the success of any participation, but also helps explain any ethical issues in design anthropological terms. From this workshop, the researcher anticipates gaining a better understanding of data set perceptions of visual elements. Also, low literate villagers could learn some ways to represent visually which may help them understand dosage. This is one key mutual learning goal between researcher and participants set up before the action.

Bruner (1960) suggests that one of the key factors in the learning process is participation, particularly through games that can be designed to incorporate those defining properties of the phenomenon being studied, properties for which the game is an analogue [14].

4.3. Clear Participatory Process

Any participatory process is learning through the increased awareness of – or sensitivity to – a problem. To maximise learning, the process should be simple and comprehensible, easy to explain, and open to change and interpretation. It should encourage mutuality, discussion and therefore collaboration [10]. Burns (1979) puts participation into four categories: awareness, perception, decision making and implementation [15]. The researcher adopted these into his workshop process, this process should, hopefully, reflect the willingness of people to work together, while not pushing them too far. Attempts at involving community residents at every stage of the design process – in a sense forcing their involvement – may lead to some withdrawals, particularly if progress toward implementation is either slow or not perceptible [10]. Sensitivity and feedback may help.

The researcher prepared a supply of medicine packages and colourful materials (memo, string, tape, plastic stickers, pens) and arranged these on a low table. The researcher's grandfather explained the purpose of the research and aim of the workshop, letting the participants touch and use the materials and try to apply use to represent dosage. This helped create awareness: participants became more curious and gathered around the table and touched the materials. Though they still showed interest, nobody started to make things spontaneously. One villager said she was worried about doing it wrong but at this point the researcher's grandfather showed an example and told everyone there was no right or wrong way. They should just choose the materials they liked and stick these onto the medicine package to represent a dosage they could understand by themselves. Two participants started to make their dosage representations while others were standing around and observing. Reflecting on the paths participation had taken in action urged researcher to rethink and consider other strategies.

4.4. Idea Triggers and Interactive Brainstorming

Next, the researcher put out a large (A1) sheet of paper and asked how the participants might choose to represent morning, noon and night. Verbal, written and drawing activities suddenly – even spontaneously – happened at this workshop. Based on their rural lives most participants represented sunlight with a typical yellow / gold colour adding directions to remind them of the time based on agricultural activities: they were out in the fields in the morning, soaking and washing feet occurred in the evening. These activities were rooted in their traditional culture and lifestyles. This interactive brainstorming helped the researcher understand better how their routines affected and arranged their conceptualisation of time. The activity also noticeably strengthened participants' perceptions of the reason for the research. This motivated them and their choices of materials to represent the time and dosage became more inventive and various. The participants certainly became more active and positive after this brainstorming session. They began to build the connections between time and dosage with these materials. These are the key decision-making processes. Some used specific colours, dots and/or images to represent this complex information.

Figure 8. Interactive brainstorming

Figure 9. Interactive workshop

Figure 10. Results of the workshop

Workshops may gain significant interaction between participants if they share – or some to perceive they share – a common purpose. A workshop should encourage participants to learn from each other as they explore issues [10]; that is, they should find the workshop allows them a positive and generative mutual moment. Whether they imitate others' ideas or not is unimportant, since this is the type of mutual learning frequent among villagers. Ideally, they should find their own visual method to represent meaning – in this case for dosage: they should then remember the pathways along which they travelled. This is one of the purposes of a workshop, to create an opportunity for them to have a chance to overcome prescription and medication issues, building self-esteem. In this workshop participants learnt to use tools to use in daily lives.

5. Evaluating Participatory Design

Reflection-on-action takes place after any participatory activity – such as a workshop – and enables participants and researchers to explore what happened and why [13]. This reflexivity is necessary to develop further questions, ideas and to think through the examples of further activities and practices.

5.1. Participatory Design as Empowerment

Participation benefits any community. Logically, the act of participation defines a community. It helps participants increase skills and thereby the qualities of the services they provide [16]. In the purpose – as in this case – is to explore and tentatively identify solutions, there can be a link between participatory activity and greater creativity in the sense that new pathways can be travelled and their usefulness mutually assessed [8]. This workshop gave the local public health clinic a new and positive function, with participants feeling for the first time engaged with finding solutions to their needs. Part of the clinic's usual work is following the guidelines of the National Health Commission of the People's Republic of China. Therefore, it provides grassroots medical services to local people, especially the most vulnerable and poorest. What they do is always to follow the provincial or county-level policy of service implementation. For example, establishing healthy parameters for daily life, visiting villages on a rotation across a district and giving regular physical examinations to those in need. This healthcare strategy is a typical top-down approach, however participatory research shows an alternative bottom-up strategy. The head of the local public health clinic reflected on this initial participatory action research and suggested that local pragmatic medical services need to explore the concepts and implications carefully, reporting onward to the provincial health organisation. The official was keen to report what such implementation might mean in terms of local healthcare, but also to explore whether the practice could be duplicated in other villages or towns by county-level or provincial health organisations. The bottom-up engagement is not only empowering it is more pragmatic: it generalises from local practice to make implementation that is sensitive to local needs. This is one aspect of participatory design the researcher wants to explore in the next academic year.

5.2. Participatory Design as a Nursery

Participatory design involves people at each and every stage. After all, it is the user – the local visitor to a rural clinic, for example – who must best understand the practices and environments where products and services are used. Importantly, becoming actively engaged in such a design project could mean that the process and its outcome are more likely to be accepted and sustained [13]. The people for whom design must work know most about what any new designs or strategies need to do. They are the key actors to make the changes necessary and make new approaches work sustainably. The bottom-up design nursery allows prototypes and mock-ups to be the direct result of participation based on the data collection and analysis and will hopefully contribute to the next stage of the research journey.

5.3. Drawbacks of this Participation Action Research

One deficiency is the limited and therefore, possibly, limiting materials. The researcher made a draft plan before he embarked on this field trip: his original idea was to plan a content workshop after the initial exploration had been completed. After he knew what he was going to do in the workshop, he searched for appropriate materials but buying these proved more difficult than he anticipated in the rural setting. Being flexible and even random could be one of the ethnographer's observation strategies but from the perspective of design anthropology, a few controlled or predictable scenarios might be needed to allow the necessary materials to be prepared and carried into the research field. These materials are more essential to researchers in design and sets them apart from pure ethnographers. Design research uses materials to communicate, aid participation, facilitate exploratory activities, help conduct interviews with participants, even triggering them to better or new understandings.

One of the arguments in favour of participatory design is that critiques – if objective and thorough – can contribute to the process of bottom-up engagement. Whether participants can be fully honest, express their ideas and have the confidence to build new systems under a form of autocratic bureaucracy remains unknown. The researcher is under no illusion that design is some kind of ideological magic bullet, purposefully altering the shapes of power. Rather, his

research may help underline what could encourage the more active involvement of users and developers in design processes.

6. Conclusion

This participant fieldwork is an attempt to suggest the benefits of changing from a top-down to a bottom-up approach, from *research for the people* to *research with the people*. At this stage, is can only be suggested that it is possible that further research more data gathering and better designed participatory workshops may better indicate the validity of approaches. Participatory research by its nature seeks to erode the distinction between researcher and the researched, the subjects and objects of any knowledge produced by participation [10]. It tests the processes of creating knowledge, the educational ideologies in place. It also seeks to develop an understanding of consciousness, and of how this new understanding may be mobilised for action.

The exploratory research was an opportunity to test participatory methodology with the special needs of the data set. After evaluation of the limited data achieved, the researcher himself has come to understand better through this initial engagement both the adequacies and inadequacies and indeed problems presented by such participatory action research. He will seek to improve methodological approaches and the instruments used in future research. The exploratory stage suggests how fieldwork may formulate the foundations of the entire research process, as well as how it can energetically and positively contribute to the research journey.

After the fieldwork, the researcher returned to Beijing and interviewed government officers at the National Health Committee. They agreed with the advantages of his participatory methodology and how it could contribute to public health advocacy. The researcher built useful connections with them and their teams – though is keenly aware of the ethical issues of ideological contagion from too close a contact with government – and may cooperate with them in the next public health advocacy policy implementation. His next research stage will identify whether participatory design could make governmental processes more responsive

7. Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

8. Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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