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Recording system that dramatically increases intellectual productivity

Yoshihiko Arizumi
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In this paper I will introduce a seemingly ordinary but special recording system. This is a method of utilizing “dead time” in our daily activities. When you get used to it, you can multiply your intellectual productivity.

Advantages of this recording system

- You can relax.
- Because you can speak casually, you can create new and innovative ideas more easily.
- You can vitalize the “dead time” that you couldn't use before.
- Because everything is flexible in this system and there is almost no external regulation or pressure, there is no need for careful preparation. Thus, you can start right now without wasting time to wait.
- Simple tasks that are common in everyday life can be tedious and tiring, but by making intellectually stimulating activities simultaneously, such a monotonous time becomes refreshing and fun.
- Since you talk much more frequently than before, it gives training for your mind, your speech becomes smoother, and as you become accustomed to verbalizing many sophisticated concepts, your power of expression is increased very significantly.
- When working on routine activities, there left open space in your mind, so inevitably various thoughts come and go. Many of them are miscellaneous thoughts, and many of them are negative and useless. Such is the time when a lot of temptations come in, too. By converting such time to research-related thoughts, you will feel refreshed, cleanse your mind, and be less worrisome with trivial matters.

However, depending on the casual recording, do we really accomplish anything meaningful? Such a question may arise. Nonetheless, the created ideas are recorded permanently, so, later we can review, edit, develop further, rewrite, and add more details. Therefore, many high quality writings that advance our research are naturally produced. Now, starting with a reflection on the current state of the university's intellectual landscape, I will explain how this recording system works, how to utilize our time, some related techniques and their benefits.

Current status of BYU's intellectual productivity

When I ask teachers/researchers of the university, many of them say that it is

difficult to find time and focus on research. Another trend is that many feel that they cannot do anything meaningful for research unless they can have a chunk of uninterrupted 3-4 hours. Many faculty members are distracted by teaching and many other community responsibilities, and are struggling with the reality that creating research time is difficult, and therefore they cannot find almost any time for research during the busy semester when they teach three classes. Moreover, if they are not engaged in research for a while, they tend to forget how far they have studied and where they are in their research; so in spring and summer, when they have time, they have to start over. There seems to be a huge waste.

On the other hand, those who are quite successful, even if they are busy, even if they may spend only 30 minutes a day writing only one or two paragraphs of a paper in front of the computer, they can surely proceed little by little steadily, and they maintain their **motivation** for research. Certainly, if we don't take regular time for research every day, our motivation will be declined. So, if there is a way to make use of a lot of time in our life that is wasted or dormant, our most researchers will be able to overcome the current limitations and greatly improve their intellectual productivity.

Is it practically impossible to make time for research during the semester of teaching three courses workload, or when you are busy with many administrative responsibilities? By using "**dormant time**," we can generate a large amount of intellectual work related to our research every day. If we use our creativity and imagination, we will be surprised to find out how we can accomplish in that process. Then, how can we do it?

How to use "Dead Time"

Many people are against with multitasking, and certainly there are many situations where multitasking doesn't work. However, a significant part of our daily life, may be more than half of them, can be used to produce many different types of intellectual activities at the same time. Therefore, such time slots can be used meaningfully for research. Many activities in everyday life use only certain parts, such as 30% or 60% of our mental capacity. For example, consider driving on your commuting route from home to university by car. During that trip, you can also engage in intellectual activities such as listening to the radio or listening to podcasts. Surely, that's an effective use of time, but you can also do more creative activities. Use a recording device to talk about research topics in the car. Then you can think about research from various angles and do all sorts of other intellectual activities. And by playing back what you recorded and keeping note of important points of the recording, you can clearly keep track of how and how far your thought process has reached. Such recording / playback / memo-taking activities can be done in a relaxed time of the day or in parallel with various simple/mechanical tasks. In this

way, with this recording system, a considerable part of the day's routine time can be devoted to research, so perhaps **one or two hours of concentrated intelligent research-related thinking** can be generated **on a busy day**. It's not difficult to get such a job done. Summarizing the time during one semester can generate extra research time of about $2 \times 6 \times 15 = 180$ hours; and in fact, it also has a ripple effect, that is, the motivation for research increases and the mental capacity in general can be maintained higher. In addition, since various opportunities will be available for our research only when the research-related activities are current and active in our mind (our audiorecording system can allow this), it will probably generate quality intellectual productivity of **250 to 300 hours per busy semester**. This is equivalent to spending a month of full time dedication for research. Now, if we organize our research efficiently, we may be able to compile a single research paper.

How can we create such a time?

When we do habitual/routine activities that are repeated every day, we often use only certain parts of our brain. For example, when changing clothes, cleaning up our body, sweeping and cleaning, dish washing, putting out the garbage container and vacuuming, only a small part of our brain function is used. For example, if only 30% is used, 70% can be used for research. So if you have a suitable recording device, you should put it around you, carry it around, hang it around your neck, or put it on your body so that the microphone is not interfered by the surrounding noises. By placing it close to your mouth, you can record it well enough for you to understand and review (the sound quality may not be good enough for others).

What time or activity can be used for research-related thinking at the same time?

“Buried”research time

In our mind, we have extra capacity to do thinking activities for research in parallel with almost every activity. First of all, let's consider an extraordinary case, teaching in class. Even in this kind of activity that draws our attention and concentration, and uses up our total engagement, we may still find a small window of time for research. In the course of each lesson, there are times when we ask questions for students to ponder for a minute or two, or we may break our students of the class into small groups for several minutes' discussion. Obviously, we may need to observe at that time or answer students' questions, but still we can find extra brief moment. Since our research is often related to the content of the lesson, we can advance our thoughts in a harmonious way on certain points of our research in such a brief moment, when we are able to **feed our mind with simple, specific research-related questions at that moment**. Such is a fairly extreme case, but there are plenty of opportunities in everyday life to engage our mind on research. For example, if you go to a store and wait in line at the cash register, you can start meaningful thinking activities if you can give appropriate inputs to your brain for those several minutes.

Then you can record the thoughts that occurred during that thought activity. Interestingly, the store environment full of many different stimuli may be more conducive to generate new ideas than when you are at your desk. The stance of explaining aloud promotes thinking. When we do cleaning and washing that don't make much noise can be suitable time slots for recording. This is also done by putting the recording device close to you or wearing it, being relaxed, operating the washing machine, folding the laundry, etc. These activities can be carried out simultaneously with research-related thinking. Our brain automatically thinks when we feed research topics into our mind. However, you have to keep in mind and make at hand the materials to think about. Waiting times at hospitals and government offices are the best places to consider. When taking care of a small child, there are times when you need to pay 100% attention, but when they are crazy about their play, it may be preferable for children to be left alone for a while. In such a case, even if it may be only a few minutes, but you can audiorecord with a recorder or take notes with an earphone for playback. Another good time slot for recording is when you feel tired and lie down on a sofa while resting your eyes and body and reflecting on various things including research-related things. It is an optimal situation when you take a walk. You can think of various things while looking at the scenery, and it is the best environment for creating new ideas. Also, when you train your body using an exercise machine such as a treadmill, it is a preferable condition to continue thinking because exercise is a simple task for our mind and in mild exercise our brain works better as research has proved well. Also, if you are scoring a test or homework, some of the work may be quite mechanical, so sometimes you can take notes while playing back an audio recording in parallel with the scoring work. Especially on campus, there are times when you have to walk from one building to another, but it may take a significant time to move around our big campus; so at that time you can record or play back, listen to it, and sometimes stop and take notes. In this way, according to my experiences, there are much more opportunities than I thought for intellectual productivity. It is possible to turn 10%, 30% or sometimes 90% of our attention to research, if not 100%.

Overcoming obstacles

If you try it out in this recording system for the first time, it may work without problems, or you may have some negative effects on your other activities. At the beginning, you need to go through a try-and-error stage before you develop a method that suits you. In my case I encountered some difficult situations in the process of incorporating this recording system into my life. For example, one day, I had a recording device in my right hand and the other belongings on the other hand, and I accidentally left my eye glasses behind, and on the next day I left my smartphone, and on my third day I left my bag in the classroom. However, after these three consecutive days of failure, there was almost no more thing left behind. Therefore, it seems that some adjustments and training period are necessary for this

system to become firmly established as a part of our life and become a habit. In addition, various trials and errors are also required to record in an appropriate way, to produce clean sound, and to devise how to operate the device efficiently. You need to improve your skills little by little in the same way as you acquire sports skills.

Feeding the brain

Let's talk about techniques for recording naturally and points to succeed in this system. Before our brain generates some thoughts, we must **feed** it with particular stimuli. In other words, the seeds or food for thinking must be provided. In my case, I list topics, questions and points to think about on an index card (**these are extracted from my notes of previous audio recordings**), and I carry it around, and I look at it right before recording. **Our brain will then start a meaningful discussion about it almost automatically.** To continue the audiorecording productive, it is effective if we make it in a form of **dialogue** with someone or **presentation** before an audience (we pretend to do it with one particular person or audience in imagination). You have to act it out!! It is really a fun! The key is to “verbalize the impression that is born in our mind.” So, use a recording device in a non-intrusive way as much as possible and **capture our utterances including seemingly trivial comments**. We may be surprised to find that **some ordinary and casual lines of thought, which are recorded and reviewed, inspire truly creative and unimaginable ideas**. It is better for us not to speak rigidly in this audiorecording, our utterance can be relaxed, undecorated, not nervous, unpretentious, and we talk in recording without scrutinizing too much what comes out of the mouth. At first, you may be uncertain about the positive outcomes from this unfamiliar endeavor. But anyway, thinking about a topic, creating chats in mind, recording them, playing them back, and noting the main points can produce incredible results. When you read it back a little later, you will find that it is filled with a lot of “seeds” that are great for developing research discussions.

Positive effects of recording system

When I actually proceeded with the research activities using this recording system, I found that there were a number of unexpected effects, as shown in the first list of items above. Recording makes you think about a lot of research-related issues, and talk about your thoughts and summarize them, so your **awareness** and **motivation** about research significantly increase. This simple fact itself dramatically promotes the entire research process. In addition, doing simple mechanical tasks in our daily life can be quite tiring, boring, burdensome, and depressive. I personally especially don't like these simple tasks, and so I often create a mess around me because ordering things is too tedious for me. However, if I do "mechanical work + recording," I can spend a lot of time and have a fun in these monotonous activities because I am thinking about research topics, which are

intellectually stimulating and I have a full control to direct it in an interesting way. Therefore, I realize the reality that such mechanical work can be done for a longer time, and my surroundings are more organized!! Even if you lie down on a sofa and close your eyes, you can record, so you can think in recording while resting.

Another effect is that you speak better. It may seem strange, but if you are verbalizing your thoughts more often, extensively and in much more details, you really hone your skills in expressing subtle and sophisticated concepts. In our ordinary life, even when we have an occasion to discuss research topics with a partner, you can't talk about things for long enough because both parties have time constraints. By continuing to talk alone, the content of the discussion can be developed much deeper and broader. Generally, there may be just a few opportunities to have meaning discussions on your research with someone when you need it critically, particularly with your research collaborators, who might be far away and not available very much. However, this recording system makes it easy to talk about various research points, so as you organize your thought in advance and when you actually explain it to collaborators and other stakeholders, you can do it much more effectively than before.

Not only that, this recording practice can be applied to things other than research. For example, when planning an event, you can use this recording system to rehearse (talk about how to proceed with the event, assigning persons in charge, items to check, and priorities of points to be noted and so forth). Then, when you run an actual event, you can take appropriate actions much more efficiently and smoothly, and you can attend to important points that are often overlooked, so you can cover everything important in a natural and confident way.

Research is always accompanied by necessary information transmission, so training such a language ability with a recording system is a driving force for more effective research.

In addition, the work of the brain itself can be 30% higher than before or even more (my subjective judgment) to quickly and appropriately identify the problem structure and take appropriate action toward problem solving. I feel that it is the case. In other words, if you are doing a lot of work that is mechanical and doesn't use your brain much, the work in your brain may be an idling state. Therefore, the slow mental work becomes the default mode, and there is a strong resistance to function our brain above that level. However, as the time spent increases using the brain for more sophisticated thinking activities along with mechanical simple tasks in the recording system, the brain's work seems to work at a higher level. If the brain function at such a higher level becomes a norm, it will be transferred to other activities. So I feel that the discussion and expressions are more effective, richer and more dynamic in teaching in the classroom and individual consultation. It is truly improving!

Next is the psychological and spiritual effects. When we are engaged in simple tasks, there is a lot of energy left in our brain, so various miscellaneous things come into it. In the meantime, you are worrying more, thinking about what you don't need, and more often being trapped into temptation. So when our brain is occupied by good research-

related ideas, we can make our hearts cleaner and nobler by directing our thoughts to various aspects of research. You will be able to keep your thoughts and actions in a better spiritual sense.

Research process and recording system

Let's look at how the recording system is used in relation to the main steps of the process as research progresses and eventually becomes a paper.

1. Vague ideas about research fields, themes, topics or images, awareness for problems, etc. come to mind in classes and during various university activities (such as reading and discussion). Make a mental mark on it and write it down later. And start thinking a little about it.
2. Talk about ideas in recording that come up without giving any restriction to this process. You can think at random. At this stage, you can develop your ideas in any direction. So, in the form of solo-brainstorming within your own mind, you can talk about freely these topics as these ideas naturally occur in your mind and record them. Here, rich discussions and development of ideas occur, so later you will replay the recorded thoughts and write down only the important parts.
3. Records will be kept in chronological order, and you will review them from time to time, and various new topics and subtopics will appear in this review process, so you add these new points to the record. You continue audiorecording, playing back and taking notes. Then, at a certain stage, the important parts are typed and summarized, and the typed contents are reviewed and edited several times.
4. In this way, a certain amount of document is completed, so you will discuss related research topics while you let someone read the document. Thus, you can effectively receive feedback from co-researchers, and you can collaborate with them and develop these activities into a joint research.
5. Review related papers, journals, articles on the Internet, etc. This step may happen during the previous steps as needed. Examine what previous researches have already done, being inspired by such papers, and develop a research agenda. After reading one paper, it is more appropriate to **stop, review and discuss in recording against the big and overall picture of the entire research**. It does not take much time. Just several minutes of recording while we take a walk after reading the paper intensely. Sometimes we may tend to read too many papers without tying these readings to the big picture and may waste time by doing unnecessary reading. After reading audio discussion you can include summarizing, criticizing and relating to other issues and matters. Since these discussions remain in the record, they can be effectively retrieved as we develop the literature review section in a paper to summarize previous studies.

6. Since various ideas have come out in the previous steps so far, and also the steps from 1 through 3 can be repeated over and over again, and thoughts are gathered over the details of the research topic and its subtopics. We will be ready to proceed with the paper well and confidently. In short, with the help of this recording system, the important points to finish the paper are carefully examined without stress, and the contents that can be included in the paper are already organized and prepared. If you have a certain amount of time to concentrate, you will be able to use these materials to compile the paper very effectively.