

## Shigeo Shingo's Influence on TPS

An Interview with Mr. Isao Kato

by [Art Smalley](#), [Art of Lean](#)

*Editor's Note: Mr. Smalley has added some additional notes at the end of this article to provide some background and subsequent investigative information.*

Isao "Ike" Kato spent 35 years with Toyota Motor Corporation in a variety of management positions in manufacturing, HR, training and development, and supplier development. Early in his career Ike was responsible for coordinating and guiding external consultant Shigeo Shingo around Toyota facilities. Ike also worked extensively developing training material for TPS under the direction of Taiichi Ohno and other executives. Internally at Toyota Mr. Kato is known as the "father of standardized work and kaizen courses". If you have ever taken a training class on either of these two topics odds are you were trained by someone that was trained by Mr. Kato or one of his disciples. He is also a master instructor of TWI material. "You can not separate people development from production system development if you want to succeed in the long run" comments Mr. Kato.

**Art:** Thanks for spending time with us to discuss this topic. I did not realize you were so involved with Mr. Shingo at Toyota.

**Mr. Kato:** You are welcome. Yes, I had a unique situation where I was responsible for coordinating most of Mr. Shingo's visits and time at Toyota. Originally it was the responsibility of one of my superiors but later the task was assigned to me.

**Art:** So when did Mr. Shingo first interact with Toyota.

**Mr. Kato:** The first visit interaction with Mr. Shingo took place outside the company in late 1955 when one of Toyota's engineers attended an industrial engineering (IE) seminar taught outside of the company. The engineer reported back to Mr. Taiichi Ohno on the contents of Mr. Shingo's seminar and Mr. Ohno suggested that we invite him to present sometime at Toyota. Mr. Shingo started coming regularly to Toyota in 1956. By this time Mr. Ohno had been working on TPS implementation for about ten years since the end of World War II. Much of the basic TPS concepts were established in a few pilot areas under his control including pacing lines by takt time, basic replenishment pull with supermarkets, visual control concepts, and some initial work with Jidoka including multiprocess handling, and some limited error proofing, etc.

**Art:** So he actually started visiting Toyota after the main parts of the system were invented although not yet rolled out company wide?

**Mr. Kato:** Yes. Technically you can't say that even Mr. Ohno invented most of TPS. Both the concepts of JIT and Jidoka for example were thought of by either Sakichi or Kiichiro Toyoda. Mr. Ohno's task was how to implement improvement in line with these concepts and how to improve efficiency in his machine shops.

**Art:** Toyota historically does not use consultants. So why was it necessary to have Mr. Shingo visit the company?

**Mr. Kato:** Yes it is quite a rare case especially now. Mr. Ohno was realizing that much of his new production system experiments depended upon the skills of engineers and supervisors to function as he envisioned. This human element could not be ignored if we wanted it to sustain. We initially

used some training materials and methods from the U.S. known collectively as the Training Within Industry (TWI) programs such as Job Instruction, Job Relations, and Job Methods. Of those three courses Job Methods was deemed the weakest and Mr. Ohno was always interested in finding something more substantial to teach the manufacturing engineers and some managers.

**Art:** So Mr. Shingo filled this gap in the company?

**Mr. Kato:** Yes, the course that Mr. Shingo taught for us was essentially some of the first industrial engineering material taught in Japan. His teachings initially consisted mainly of process analysis, motion analysis, and time study analysis. All of this helped us to stabilize and improve our production processes. Amazingly Mr. Shingo was just a high school graduate and self taught in many respects. As he comments in his own writings he initially learned from books, personal study, and some experimentation on the job. His content has a lot of its intellectual precedents in the teachings of Taylor, Gilbreth, Osborne, and others.

**Art:** How many times did he actually teach at Toyota?

**Mr. Kato:** We kept a record of courses in the training department. I think after 20 years he was up to 79 courses and trained over several thousand people overall. So on average he taught about four times per year for a couple of weeks in total. Most of his work load was actually with other companies and not Toyota.

**Art:** Somewhat surprisingly it sounds like most of his interaction was predominantly in a class room environment with Toyota?

**Mr. Kato:** Yes much of it was. Each course also went to the shop floor for a couple of hours for observations as well. The only other interaction he had with Toyota Motor Corporation were a few other periodic invites to tour facilities and attend improvement workshops on certain problems we were tackling in Mr. Ohno's production facilities. He would provide comment and feedback on the activities we were undertaking.

**Art:** Who actually invited him to the company?

**Mr. Kato:** It was Mr. Ohno's suggestion that we invite Mr. Shingo to visit the company and have him teach his process improvement concepts to our manufacturing engineers. The invite was extended through my former department the training and development section of human resources. For many years I was Mr. Shingo's point of contact in the company and I lead him around our training locations and production facilities.

**Art:** What type of things did he observe and comment on in the company?

**Mr. Kato:** Mostly he helped train engineers in improvement methods in the class room and on the shop floor. When he visited the shop floor he looked at the basic production processes in manufacturing. He never visited product development, production engineering (process planning), production control, quality, or any other functional area for that matter. His interaction with the company was strictly limited to areas of manufacturing.

**Art:** How useful was his advice?

**Mr. Kato:** He was a very good instructor of industrial engineering concepts, process analysis, and improvement. Obviously this influenced our development of kaizen. He taught the basics of process analysis such as recognizing the fundamental components of process work, inspection work, transportation, and delays. Each of those could be broken down and analyzed further of

course. He also taught the basics of motion analysis, and importance of time study in studying processes for improvement potential. His teachings helped people learn to see the problem in a variety of different ways.

**Art:** What was the biggest area of contribution he made?

**Mr. Kato:** By far the biggest area was helping us develop a course that replaced the Job Methods (JM) part of TWI. Together we summarized Mr. Shingo's material into a training course that we called the "P-Course" which stood for production and how to analyze a production process. As I mentioned he trained a couple thousand young engineers and managers over a twenty year period. His influence on these people and their subsequent ability to see problems and waste was quite large. Eventually however we replaced his course with a standardized work and kaizen course that we created on our own internally.

**Art:** So his biggest contribution was not in the area of set up reduction (SMED)?

**Mr. Kato:** Actually no. There is a lot of historic misrepresentation and miscommunication of the facts regarding that topic. Toyota was already reducing set up time before he came to the company. Just using the simple eliminate, combine, rearrange, and simplify (ECRS) framework from our TWI Job Methods training course Toyota had already brought die change times down from four hours to one hour and 40 minutes for example without any outside help.

**Art:** But didn't he famously reduce a 1,000 ton changeover press from over four hours to under 3 minutes or some level in Toyota?

**Mr. Kato:** Somehow this fact has continually been mistaken and misrepresented over the years in various books and articles. Mr. Shingo's single minute die exchange accomplishments were all accomplished outside of Toyota in other companies on smaller machines. Toyota had been working on its own to reduce its longest change over time on its largest press and succeeded in reducing it from four hours to around one hour and 40 minutes. One day Mr. Ohno asked Mr. Shingo to look at this current changeover process and give us ideas on how to reduce it to under ten minutes. Mr. Shingo studied the problem and shared with us his distinction between internal and external work and the framework. It made sense but didn't immediately solve any of the current problems.

**Art:** So he didn't actually invent or implement SMED at Toyota?

**Mr. Kato:** He gave us some specific suggestions to work on and those ideas plus some others that a team was concurrently working on helped to reduce set up time from one hour and forty minutes it down to just about forty minutes. That was as far as they were able to reduce the time however during that particular workshop and it was his only real involvement in reducing changeover time at Toyota. Eventually several years later the engineers on their own with Mr. Ohno's constant prodding were able to get the time under ten minutes but it was without Mr. Shingo's direct help. He did provide some earlier advice however. Unfortunately this sequence of events has been misrepresented over the years somehow.

**Art:** The perception in the U.S. is indeed somehow quite different.

**Mr. Kato:** The fact is that Mr. Shingo did come up with the insightful difference between internal and external work. And of course he did leave us with a list of ideas but nothing we didn't realize on our own. His main successes with set up reduction came in companies outside of Toyota on much smaller machines. I'm sure he had many under ten minute set up reduction success stories there, but honestly none inside of Toyota.

**Art:** How famous is Mr. Shingo in Japan?

**Mr. Kato:** Unfortunately not very much. I think it is analogous to the situation with Dr. Demming for example. In the U.S. for many years Demming was ignored and yet widely received in Japan. We invented a famous prize for him. In Shingo's case he is not well known in Japan especially compared to Mr. Ohno. But I believe that Mr. Shingo is somewhat famous in the U.S. and I heard there is even a prize his name.

**Art:** Yes. I am a proud recipient of a Shingo Prize in research for contribution to lean manufacturing knowledge for example.

**Mr. Kato:** So why is there no Mr. Ohno prize for TPS achievement? **Art:** I don't know. I guess Mr. Shingo has had better marketing and promotion in this country. I think he was willing to venture out to the U.S. more and help companies. I don't think that Mr. Ohno did this so much. He stayed more in Japan.

**Art:** How then is Mr. Shingo's legacy generally viewed in Japan?

**Mr. Kato:** In Japan he is primarily viewed as a the first consultant that taught IE methods, studied TPS and then wrote books about what he observed. His books were the first translated into English and that probably made him famous outside of Japan since that was all the external world had at first to read. He is more famous outside of Japan than inside.

**Art:** Interesting. What kind of relationship did Mr. Shingo have with Mr. Ohno at Toyota?

**Mr. Kato:** It was quite good in the beginning. They complimented one another. Mr. Shingo helped to fill a detailed need that we had with respect to training engineers and some managers. He was a great help in this respect and a good teacher that helped shape our thinking on basic process improvement. Over the years however the relationship did start to weaken for a variety of different reasons.

**Art:** Why is that?

**Mr. Kato:** The perceived need for his basic "P-course" declined as time went on. The new engineers we were hiring were very bright and from top academic programs. Universities and other places were also now teaching IE methods and people internally were making improvements in other ways. Partly due to success there just became less of a need for his specific training course over time. Secondly Mr. Shingo had a tendency to argue somewhat theoretical concepts. He often wanted us to arrange for him to meet Mr. Ohno so he could debate him on the merits of TPS versus Shingo's views on process improvement. Mr. Ohno did not have time for this type of academic debate and was increasingly reluctant to meet him. When Mr. Ohno was promoted to increasingly higher levels in the company and this also just left less time to meet with people. The task of handling Mr. Shingo fell to people on Mr. Ohno's staff and others including myself. Third towards the end there was some resentment from some quarters that Mr. Shingo was taking more out of Toyota including examples and materials than he was contributing to the company. This caused difficulties in the relationship especially when Mr. Shingo started publishing books about TPS without fully informing us beforehand. It felt like he was also asking to visit the production plants very often towards the latter years to look for more ideas to write about. Anyway eventually these three factors plus Mr. Shingo's age got to a point where it no longer made practical sense to invite him to Toyota any more. We made a "mutual decision" to stop his internal course and halt any more visits to the plants. For nearly twenty years however it was overall a good relationship and the company is indebted to his teachings in many ways.

**Art:** I can see how this would not go over well with Toyota. In hindsight then how much of TPS did Mr. Shingo really invent or develop in your opinion?

**Mr. Kato:** In my opinion it is incorrect to label him as an inventor of TPS. An outside consultant teaching four times a year could not have invented or implemented the system. You need to understand however he deserves credit for a very different reason. As I stated in the beginning most of the basic principles of TPS were established in some form or other before we associated with Mr. Shingo and before he came to visit the company. JIT, Jidoka, and all the associated concepts that make up those two primary pillars of TPS are uniquely Toyota's. Of course while Mr. Shingo was at Toyota we would introduced the concepts to him for study, feedback, etc. He often did provide very good ideas but he was commenting on what we were doing and not actually inventing it himself or leading the activity. He helped us improve implementation of our methods and processes. As I stated earlier his main contribution to Toyota was actually as an instructor of fundamental process improvement methods and developer of several thousand manufacturing engineers in the company. This influence should be properly recognized as we all learned a great deal from him on how to see problems in production.

**Art:** I'm somewhat surprised. You put his main contribution much more on the human development side than the TPS technical development side?

**Mr. Kato:** He should receive credit for his long term effort and help in developing many key people in Toyota. Almost every engineer and manager was touched by him in some way back then. His views on how to see problems in production especially at the detailed process level were very influential and useful. Also as I stated he did develop his concept of SMED and the importance of separating internal work from external work on his own. And he did help many companies in Japan outside of Toyota make improvements especially in the area of work productivity and set up reduction. Mr. Shingo had a real knack at taking what we were doing internally and stating it in very logical terms. Often we did not have the time to do this work. In this sense he was much less of an inventor and much more of a person that could codify and rationally explain things in clear terms. I think this is why his books and materials were successful.

**Art:** This has been very interesting. Thank you for your time.

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*Note: The following paragraphs constitute some background information and my subsequent investigation and personal opinions relating to my conversation with Mr. Isao Kato a retired Toyota Manager regarding the role of Shigeo Shingo in TPS formulation.*

In the early part of 2006 I decided to set out and interview some retired Japanese managers of Toyota Motor Corporation over the course of this year. A couple of them I have known for about two decades since I worked for Toyota in Japan and a few others I still plan on contacting through intermediaries. The purpose for the interviews stems from my personal interest and inquiries I often receive regarding the history of the Toyota Production System. Specifically the twenty five year period after the end of World War II up until about 1970 interests me the most.

During this time Toyota nearly failed as a company, members of top management were forced to resign, and around one third of the work force was laid off in order to appease Toyota's bankers and keep the company afloat. After the near bankruptcy crisis in 1950 however the company really began to take off in terms of improvement and development of its production system. What was done first? What problems were being solved? How were they solved? Who did what and why? Toyota was not using value stream maps or kaizen events back in those days as the tools

came several decades later so what actually transpired? These are all points of personal interest and events I'd like to learn more about as possible.

One of the first people I turned to for a series of interviews is Isao Kato. While relatively unknown to the outside world Mr. Kato is famous inside Toyota as a primary developer of material related to TPS. For decades he created and maintained the internal TPS training material related to a variety of topics including the training within industry (TWI) courses, standardized work, kaizen, role of a supervisor, and many, many others. He also worked in manufacturing for a couple of years and spent time as a master trainer and for a period worked in Toyota's famous internal operations management consulting division.

As much as anyone alive Mr. Kato knows the history of TPS development from an insider's point of view from the 1950's forward. He also had working relationships with Mr. Ohno even more so with Mr. Shigeo Shingo (or Dr. Shingo as he is known in the west). One of the interview topics I discussed with Mr. Kato related to the historical role of Shigeo Shingo in the formulation of TPS inside Toyota Motor Company. Much to my surprise the role of Mr. Shingo and actual development of TPS according to Mr. Kato has been somewhat mistaken over the years especially in the U.S. The article highlights with dates and a high degree of specificity regarding what Mr. Shingo actually did at Toyota. I have no reason to question Mr. Kato on the content given his first hand experience and role in formulation of the subject material. For the sake of confirmation however I did execute a couple of basic "checks" to verify what I could regarding Mr. Kato's comments on the situation. Here is what I found which leads me to believe his story although probably surprising to some people stands the test of scrutiny.

#### 1. How is Shingo perceived in the U.S. versus Japan?

- I checked with several Toyota Japanese colleagues still in the company and very few of them are aware of Mr. Shingo's background at all. He is more highly regarded in the west than he is in Japan.
- On Amazon's Japanese language site Mr. Shingo's books are not even offered any more in Japan much to my chagrin. I found one out of print title that I ordered through a third party on-line channel. But one month later it has still not arrived.
- Through the fine efforts of people like Norman Bodek, Productivity Press, and the Shingo Prize Institute it appears we have more material available in the U.S. on Mr. Shingo than there is in Japan.

#### 2. Could Mr. Shingo have "invented" the major parts of TPS?

- Given what I have so far verified it is an extremely difficult argument to make for a couple of fundamental reasons which I will outline below.
- First the origin of the term JIT was coined by Kiichiro Toyoda in the 1930's and not by either Mr. Ohno or Mr. Shingo. Mr. Ohno experimented on machining lines in Toyota and arrived at a working model of TPS with replenishment pull and other techniques before Mr. Shingo arrived on the scene at Toyota.
- Additionally the second pillar of TPS of Jidoka dates back to 1902 and the invention by Sakichi Toyoda of his automatic loom that stopped at the sign of a defect. Mr. Ohno came from the automatic loom factory part of Toyota and started separating man from machine and building in quality as soon as he transferred to Toyota's automotive company in 1945. Mr. Shingo acknowledges in Japanese that he admired and learned this concept from Mr. Ohno and his visits to Toyota. (I can forward the exact passage in Japanese for anyone interested)
- Thirdly the concept of "respect for workers" inherent in the system is a concept that comes more from the Toyoda family than any other source. I can't find any record of Mr. Shingo claiming to have invented this concept.

- Other tools like standardized work, production leveling (heijunka), one piece flow, 5S, 7 wastes etc. are all traceable back to Toyota roots and internal influences as well. Others such as PDCA, time study, motion analysis, supermarkets, and basic flow production come from the West. Takt time is a German influence from the aircraft industry. Mistake proofing is something that different parties have claimed over the years.
- It is 100% recognized by Toyota veterans however that Mr. Shingo drove the concept of SMED in Japan and helped Toyota eventually get down to this benchmark level. The work was started by Toyota however before Shingo's cooperation began and continued after he left. As Mr. Kato illustrates the conversion to less than 10 minutes was a nine year effort and not a single workshop conversion by Shingo as is sometimes mistakenly portrayed. I do believe and echo Mr. Kato comments that Mr. Shingo did a lot of SMED work outside of Toyota Motor Corporation. This process and chain of events very likely may have just been confused or mixed together over the years by different parties and story tellers.
- It is 100% recognized by Toyota as well that Shingo's famous P-course that he taught at Toyota has influences on the concepts of Kaizen and actual implementation of process improvement efforts at Toyota.
- It seems to me that Shingo certainly influenced some aspects of TPS during his dealings with Toyota Motor Corporation between but it is not possible to claim he "invented" the system given the above and other points that I will not bother to detail at this point in time.

3. What is actually written by Mr. Ohno? Ohno really only wrote two books on TPS and he did not believe that the system could be codified in writing. For years he resisted the codification of the system internally since he was afraid it would be insufficient or too superficial.

- In his writings and internal talks however he acknowledges the roles of Kiichiro, Sakichi, and Eiji Toyoda in the development of the main concepts of TPS. He also acknowledges the fundamental role of Henry Ford's production system. Mr. Ohno often verbally stated he "learned all he needed to know from Ford's book entitled Today and Tomorrow".
- I have no doubt that Mr. Ohno considered Mr. Shingo a collaborator and timely ally. Verbal reports however which I can not yet verify point out they only met a few times and not on every trip by Mr. Shingo to Toyota.

4. What is actually written by Mr. Shingo?

- I have been pouring through several of Shingo's books in Japanese the past few weeks. In general I have intentionally stayed away from the English versions of his material for a couple of reasons. First the Japanese accounts and the English accounts are hard to match up probably due to the role of different versions, various editors and translators over time. Second there are passages across different books (mainly the English versions versus older titles in Japanese) that appear to be somewhat contradictory. The Japanese volumes I consider to be more accurate source material since they are both older and would have been penned and checked more carefully by Mr. Shingo himself.
- Regardless I can't find any claim by Mr. Shingo in Japanese to have even remotely "invented" TPS. A typical phrase regarding his role is essentially the following – "I firmly believe that the 3,000 engineers I trained at Toyota played a role in developing the base for on going TPS improvements in Toyota". Not exactly a claim of invention by any means and something I am sure that Toyota executives would agree with.
- In English in the preface to his book, "A study of the Production System from and IE's Viewpoint" published in 1989 in the U.S. Mr. Shingo states on page xxvi that "Mr. Ohno is the originator of the system". (I don't view this as fully correct either given the role of various Toyoda family members).
- A specific passage in Japanese in one of his books also cites Shingo's astonishment and admiration for the basic concept of Jidoka which Mr. Ohno rolled out in his machines

shops between 1945-1955. Again not really a claim of invention and one that backs up Mr. Kato's essential comments regarding his role.

- I can supply the Japanese book titles and passages to anyone interested.

#### 5. What do other knowledgeable parties say?

- I checked the contents of the interview via a couple of exchanges with several people. Tom Harada my former boss in Japan who also worked with Mr. Ohno in Toyota's engine plant provided commentary. Russ Scaffede a former American VP in Toyota read the article as well. Former Toyota Manager John Shook provided some comments and verification of the timeline of events in TPS. Norman Bodek sent a couple of e-mail messages as well.
- Tom Harada agreed with the series of events and deferred to Mr. Kato entirely stating that Mr. Kato would know this topic better than anyone else in the world.
- Russ Scaffede only worked for Toyota in the U.S. but traveled to Japan and was mentored by Toyota executives Mr. Fujio Cho and Bud Sato. Russ affirms that Kato's narrative coincides with his conversations with these two Toyota executives and others in the past.
- John Shook who speaks and reads Japanese like myself could find no error in Mr. Kato's comments and corroborates the content. He agrees that it is not possible for Shingo to have "invented" TPS and attributes some of the confusion to the language barrier, dates, names, and anecdotes that have been mistaken over the years by people outside of Toyota.
- Norman Bodek who brought Mr. Shingo to the attention of the western world commented that Shingo did much in the Toyota supplier community that is not covered in the article. I agree and this work would have occurred in the 1970's and 80's but well after TPS was done internally in Toyota – technically the suppliers are not part of the parent company as Denso and other parts were broken apart from Toyota under the MacArthur reforms in Japan to prevent any recurrence of the old "zaibatsu" influence in industry.
- Mr. Bodek also claims that a document authored by Mr. Shingo laid out the foundations for TPS in 1946 and I have asked for a copy of this material to view. It may no longer even exist. It appears from Shingo's bibliography however that he made a "presentation" to the Japan Management Association in 1946 regarding the difference between "process" and "operations" which he had previously thought to be separate entities and he now viewed them as a "parallel network of processes and operations". The report does not appear to be published and its short description falls very short of a framework for TPS.
- Regardless Toyota had no regular interaction with Shingo or any of this material until 1956 (several of Shingo's books and Mr. Kato agree upon this) so the report is unlikely to have had much impact on TPS formulation. JIT and Jidoka concepts pre-date 1946 anyway. I suspect the material is more about Mr. Shingo's view of production improvements in general and I have no doubt it probably coincides with some aspects of TPS thinking but stops far short of being a framework. Hence it is highly unlikely that the presentation would be a "source" for TPS. I look forward to reviewing the material however for historical reasons and verification.

#### 6. So what do I personally conclude at this point?

- I find no reason to disagree with Mr. Kato's characterization of Mr. Shingo's actual role inside the Toyota Motor Corporation specifically between 1955-1975 in particular. His explanation checks out on several levels and seems the most plausible with the facts that I can uncover.
- Mr. Kato still looks upon Mr. Shingo with great appreciation and respect. He bore no grudges or ill will that I could detect during the interview. The only minor indignation

- expressed by Mr. Kato was directed at general misconceptions in the West surrounding the actual historical role of Mr. Shingo at Toyota Motor Corporation.
- I have been a consultant and hired consultants many times over the years. It would be difficult for any consultant to invent and deploy TPS from the outside as we have learned. Toyota is amazing in that they have largely done it alone through internal efforts with internal leadership. Also Mr. Shingo acknowledges he only averaged 3-4 visits per year to Toyota Motor Corporation during 1955-1975. I find this just too infrequent to attribute him a primary leading or inventor type of role in terms of timing of his visits and duration. I honestly can't find him claiming such a role either in his own words.
  - I do strongly believe that Mr. Shingo played a role in the formation of SMED, Kaizen, and development of manufacturing engineers at Toyota. The role is one as a strong contributor however and not one of primary inventor (with the exception of the SMED process).
  - Many Toyota executives in the past have credited Mr. Shingo with influencing and aiding TPS development but they all stop well short of stating that he played an inventor type role.
  - Unfortunately a lot of the stories surrounding Mr. Shingo's exploits are verbal anecdotes passed along by word of mouth. Many of them relate to stories told by people such as Mr. Iwata and Mr. Nakao of Shingijutsu Consulting fame. The problem from a historical accuracy point of view is that these gentlemen only worked for Toyota suppliers and interacted with Mr. Ohno and Mr. Shingo starting in the period around 1975 forward. This is too late to have any perspective on the period in question between 1955-1975 where Mr. Kato is one of the few remaining parties with first hand experiences. Neither Mr. Iwata or Mr. Nakao would be in a position to verify internal TPS development in the 1950's and 60's in Ohno's machine shops – their views would just be personal conjecture on the matter or second hand tales at best.
  - In my opinion the overall the roles of Sakichi, Kiichiro, and Eiji Toyoda have been greatly understated regarding the formulation of TPS. The roles of both Mr. Ohno and Mr. Shingo have probably been overstated. There are also dozens of "unsung heroes" in Toyota that also have not been given due credit over the years for the actual work they performed.
  - Outside of Toyota Motor Corporation I suspect Mr. Shingo did play a larger role in manufacturing improvements in Japan. Most of his time leading up to 1975 and all of his time thereafter was spent with companies outside of Toyota. After 1975 he indeed was active in the supply base.
  - Mr. Shingo's books were basically the first translated from Japanese into English for the western world to learn about TPS. It is quite natural in hindsight given the limited information available that the West would "assume" he played a greater role in TPS that is historically plausible. We tend to use what information is available and make logical inferences from there. With most of TPS source material in Japanese however people in the West have used a very small data base in arriving at conclusions.
  - For the record I have a vested interest in keeping Mr. Shingo's name alive and factually accurate regarding TPS development. The Shingo Prize Institute was kind enough to award me with a research prize for a workbook I published in 2004. Earlier this year 2006 they also inducted me into their Shingo Manufacturing Academy for contributions to manufacturing excellence. I would like to see ties between the Shingo Prize Institute and Toyota more closely aligned if possible.
  - I plan to visit Japan this summer and will try to obtain more detail regarding the famous P-Course that Mr. Shingo taught and see if any other surviving members of the period can offer first hand insights. I am also keenly interested in any other material authored by Mr. Shingo especially in Japanese which is more likely to be accurate than the compilations we have today in English.