Measures that Matter Most

I actually picked this topic before I knew that the theme of SAGE 2017 would be about sustaining impact and ways we can measure it. But this is about measuring something that I think matters even more.
(I took small Halloween-sized packages of M&Ms and handed out to the ~70 or so people that were there)

Did you know that the original meaning of SERVIR came from this acronym? Dan Irwin I'm glad that you run this program better than you come up with acronyms! (Dan Irwin is the original SERVIR Program Manager which is now run by him as a consortium between USAID and NASA).

SERVIR

To Serve

- Measures
  - Uptake of projects
  - Capacity of hubs increased
  - Stakeholders end users engaged
  - Sustained impact
- People's lives improved

SERVIR GLOBAL
CONNECTING SPACE TO VILLAGE

However identifying SERVIR as the word to organize the acronym around was brilliant because SERVIR or To Serve embodies what we are all about – Improving People's Lives as we bring our Space/Earth Science to the Village.

Context

- Moral Compass and Connection to Family and Humanity
  - Mine comes from a faith and religious conviction in God and a Divine Plan
  - Missionary Service in the Dominican Republic

Everything good that has happened to me since then I can trace back to it

I think we all share the common desire to benefit the human family with our work. Whether through a belief in God or some other guiding set of moral values, it is evident in all of the work of SERVIR.

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For me it comes through a faith and religious conviction that there is God in Heaven who has a Divine plan for us. We work that out by helping and serving one another. This really began to blossom for me when I served as a missionary in the Dominican Republic.

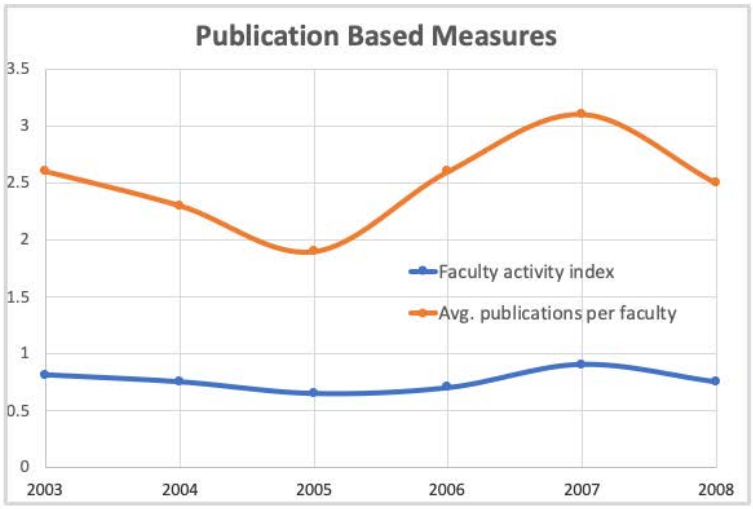
21 Employee Performance Metrics

1. Management by objectives
2. Subjective appraisal
3. Product defects
4. Number of errors
5. Net promoter score
6. 360 degree feedback
7. 180 degree feedback
8. Forced ranking
9. Number of sales
10. Number of client contacts
11. Number of phone calls
12. Number of company visits
13. Number of active leads
14. Number of units produced
15. Handling time
16. Work efficiency
17. Revenue per employee
18. Profit per FTE
19. Human capital ROI
20. Absenteeism rate
21. Overtime

Back to measuring success. In the professional world you can see it is all about productivity and efficiency. How much “X” can we get done in “Y” or how many successes relative to failures.

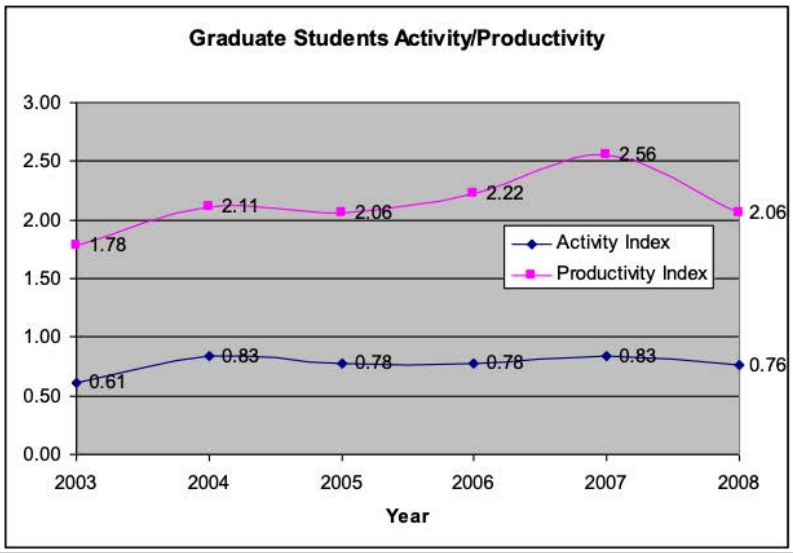
Scholarly Measures

- Number of Publications
- Research Dollars
- H-Index
- Impact Factor



In our academic circles it is always about how many publications or research dollars or some measured impact. As a graduate coordinator I used to churn every time I saw charts like this to measure our successes.

But, What Matters Most?



And while I'm not suggesting it isn't important to have academic success, I think in the long run the measure that matters most is the number of student's lives we impact. So I used to like to show this graph so that we don't lose focus on that.

Publications

1) Swain, N. R., S. D. Christensen, A. D. Snow, H. Dolder, G. Espinoza-Dávalos, E. Goharian, N. L. Jones, E. J. Nelson, D. P. Ames and S. J. Burian (2016). "A new open source platform for lowering the barrier for environmental web app development." Environmental Modelling & Software, Volume 85, pp 11-26.

2) Snow, Alan D., Scott D. Christensen, Nathan R. Swain, E. James Nelson, Daniel P. Ames, Norman L. Jones, Deng Ding, Nawajish Noman, Cedric H. David, and Florian Pappenberger, "A New High-Resolution National-Scale Ensemble Hydrologic Forecast Model and Dataset," Journal of American Water Resources Association, Special Collection for the Open Water Data Initiative, Volume 52, Number 4, pp 950–964, DOI: 10.1111/1752-1688.12434.

3) Perez, Fidel J., E. James Nelson, Norman L. Jones, Alan D. Snow, Nathan R. Swain, Scott D. Christensen, and Herman G. Dolder, "From Global to Local: Providing Actionable Flood Forecast Information in a Cloud-Based Computing Environment," Journal of American Water Resources Association, Special Collection for the Open Water Data Initiative, Volume 52 Number 4, pp 965–978. DOI: 10.1111/1752-1688.12392

4) Dolder, Herman G., Norman L. Jones, and E. James Nelson, "Simple Method for Using Precomputed Hydrologic Models in Flood Forecasting with Uniform Rainfall and Soil Moisture Pattern," ASCE Journal of Hydrology, Volume 20, Number 12, December 2015.

5) Jones, David, Norm Jones, James Greer, and Jim Nelson, "A cloud-based MODFLOW service for aquifer management decision support," Computers and GeoSciences, Vol. 78, pp. 81-87, 2015.

6) Wait, Isaac W., and E. James Nelson, "Concept Inventory for Engineering Hydrology – Development and Implementation," Proceedings of the 122nd ASEE Conference, Seattle, WA, June 2015.

44) Nelson, E. James, Glenn E. Moglen, and Larry Arneson, "*Building a GIS Database to Support Hydrologic Modeling at the Maryland State Highway Administration*," Proceedings of the 78th Annual Meeting of the Transportation Research Board, January 10-14, 1999, published on CD ROM.

45) Nelson, E.J., A.W. Miller, and N.L. Jones, "*A TIN Based Watershed Delineation Technique for Both Rural and Urban Runoff*," American Water Resources Annual Spring Symposium, April 23-26, 1995, Salt Lake City, Utah.

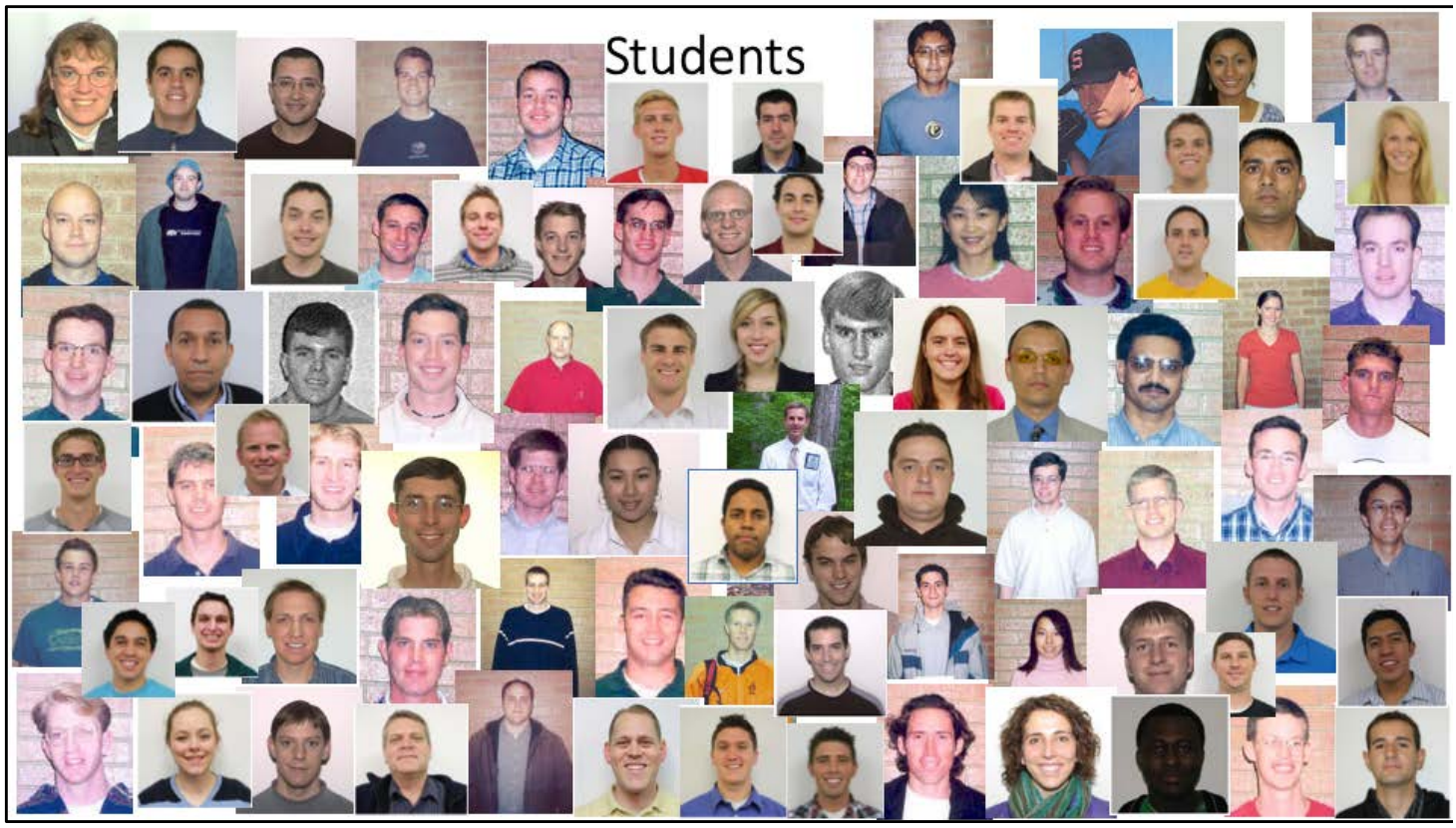
46) Nelson, E. James, and Norman L. Jones, "*Reducing Elevation Roundoff Errors in Digital Elevation Models*," Journal of Hydrology, Vol. 169, pp. 37-49, 1995.

47) Nelson, E. James, Norman L. Jones, and A. Woodruff Miller, "*An algorithm for precise drainage basin delineation*," ASCE Journal of Hydraulic Engineering, March, 1994, pp. 298-312.

48) Nelson, James, Norman L. Jones, and A. Woodruff Miller, "*Integrated hydrologic simulation with TINs*," Advances in Hydroscience and Engineering, Volume 1, Sam S.Y. Wang, Ed., Proceedings of the First International Conference on Hydro-Science and Engineering, Washington, D.C., June 7-11, 1993, pp. 571-578.

49) Jones, Norman L., and E. J. Nelson, "Construction of TINs from borehole data," *Advances in Site Characterization: Data Acquisition, Data Management, and Data Interpretation*, ASCE Geotechnical Publication No. 37, 1993, pp. 13-26.

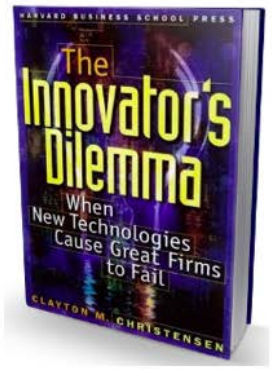
In my own case I'm proud of my publication record and the impact of the work I've been involved in, and it is important to do well if we want to be able to enable students.



But the thing that gives me the most satisfaction and I believe the true measure of my success and impact are the students. These are the graduate students I have had the privilege of working with in the ~20 years I have been a faculty at BYU. I owe much of my success to them.

Clayton Christensen

- Disruptive Innovation
  - Transistor Radio
  - Pocket Calculator
  - LCD TVS
  - Mobile phones



Clayton Christensen developed the idea of a “disruptive” innovation which is something like the transistor radio, pocket calculator or cell phone. These were less powerful/quality versions of their predecessors but because of their convenience and massive market potential they completely took over the market.

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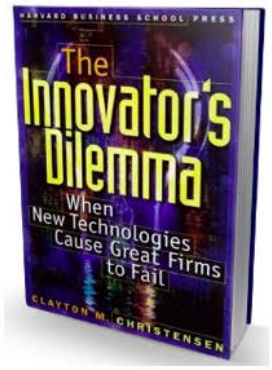
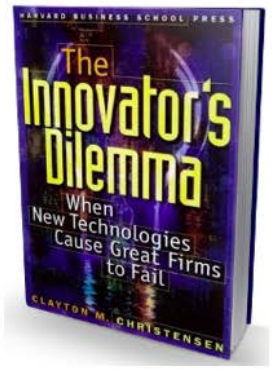


This was true because the leaders of the companies producing the higher end products were already making good money and a good return on investment and didn't see the need to enter markets with lower returns that might take a long time to ever recover investments.

Clayton Christensen

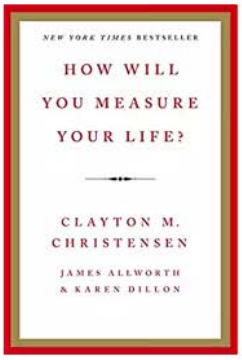
- Disruptive Innovation
  - Transistor Radio
  - Pocket Calculator
  - LCD TVS
  - Mobile phones
- Why?
  - Successful companies want highest ROI
  - They look for immediate results



They wanted to invest in the thing that provided an immediate return and because of they didn't see the wave coming. Companies are blinded by their own current successes to be able to properly evaluate the impact and "danger" of a disruptive innovation.

How Will You Measure Your Life?

- Rhodes Scholar Oxford
- Harvard Business School Leader
- "Disruptive Innovation"
  - Most influential business idea of the 21st Century
- But this still wasn't how he articulated he would ultimately measure his own life



Clayton Christensen is one of the most successful business leaders of our time. His disruptive innovation has been considered the most influential business idea of the 21st Century, and yet he does not articulate the measure of success in his life in terms of these things.

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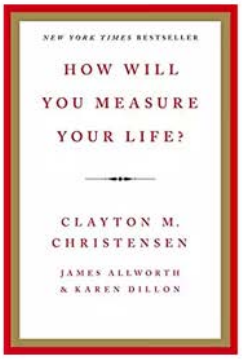


In his best selling book "How Will You Measure Your Life" he talks about how people eager to establish lasting impact in their professional lives, going for the things that seemingly have the biggest return on investment now lose track of what matters most, which is…

Disruptive Innovation Impacts and the Family

- Families are a long term investment







The family and relationships with those closest to them. Let's face it children and relationships that matter most are HARD WORK, and the prospect of a return on investment is years in the making.

To be successful that investment involves

faith, prayer, repentance, forgiveness, respect, love, compassion, work, and wholesome recreational activities.

Investing time and energy in family life might not seem as productive in the moment as our next paper, project report, or conference, but it is a ”disruptive innovation” in the making if we don’t pay attention to important investments such as faith, prayer, repentance, forgiveness, respect, love, compassion, work, and wholesome recreational activities.

Measures that Matter Most

No success in public life can compensate for failure in the home.

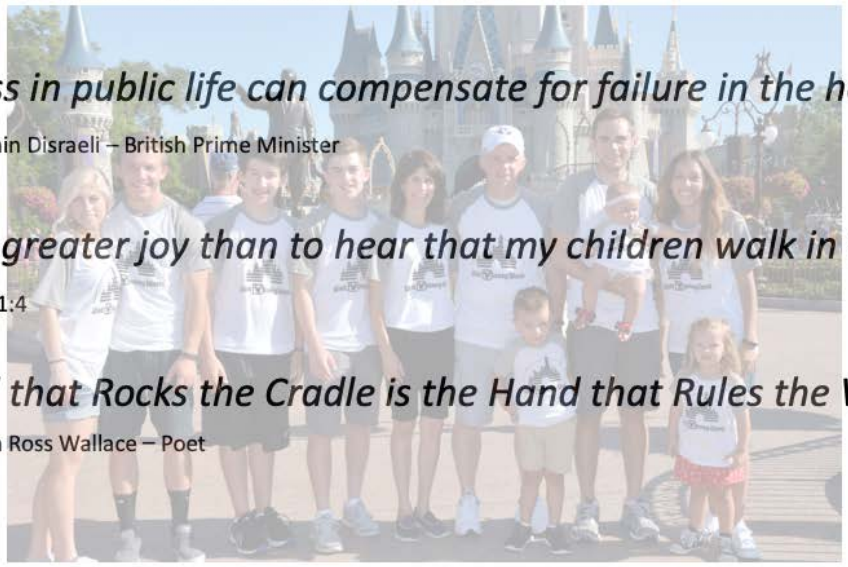
Benjamin Disraeli – British Prime Minister

I have no greater joy than to hear that my children walk in the truth

3 John 1:4

The Hand that Rocks the Cradle is the Hand that Rules the World

William Ross Wallace – Poet



This is why I often display a picture of my family in my technical presentations. It reminds me of what matters most and that the most important Co-PI I have is my wife and that our family is the measure that will ultimately matter most. (in academic jargon a PI is a Principal Investigator on a project)

What I have come to realize is that no matter what else is going well in my life, I am only happy when my family is doing well. At the end of the day my professional work is likely to be replaced and soon forgotten, and the impact that comes from the investment in family (and other relationships) matters a lot more.

Measures that Matter Most - Final Thought

It's actually really important that you succeed at what you're succeeding at, but that isn't going to be the measure of your life.

So I hope that this will be a reminder to us all of what matters most. Clayton Christensen has said, “It's actually really important that you succeed at what you're succeeding at, but that isn't going to be the measure of your life.” That success will enable us to have greater impact in our relationships, but it won’t be the measure. Now, if you enjoyed an M&M while I was talking I challenge you to be sure and acknowledge tonight through text, email, or a call the person or people that matter most to you!