

# Chaos Theory and APPR

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Although Chaos theory had its origin in mathematics, it must have been field tested in education. Chaos theory is the study of predictable, dynamic systems that are very sensitive to changes to initial conditions. If the initial conditions are modified, the system becomes very unpredictable! Case in point – APPR.

Systems for evaluating teachers and administrators are dynamic and sensitive as such evaluations are closely linked to school culture/climate and student characteristics. Educators across the state have been trying to balance this dynamic process with a far less sensitive accountability system. School districts have worked diligently to try to measure teacher and principal effectiveness using strategies borrowed from the field of business management but it has been challenging to find the best fit between assessment selection, predictions of student performance, and alignment to ratings of teacher/principal effectiveness. After three years of implementation, new processes were beginning to stabilize; however, the results fell far short of policymakers' desired goals, as the majority of teacher ratings fell into the highly effective and effective range. Chaos theory could have predicted this as any changes to a sensitive and dynamic system (in this case, teacher evaluations) would create unpredictable results.

Enter Phase II of APPR. In the world of policy, the remedy is to “fix” the rating processes by requiring even tighter measurements. And so, another injection of chaos was administered. To date, this second dose has introduced even greater uncertainty. Using Chaos theory to frame the current state of affairs, the field needs to ask: *How much more uncertainty can be introduced into the system of teacher evaluations until the entire system is rendered total chaos?* It is an especially significant question to raise as a new budget and legislative session begins.

What solutions can Chaos theory provide? An important component of this theory is finding a balance between identifying accurate information and using it in non-invasive ways. For teacher evaluations, this may mean continuing to obtain the best information possible from observations and student performance and use it in a system that is adaptable to each district's unique context.

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