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F. Todd Goodson
Kansas State University

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In Search of More Mature Uses of Data: Problematizing Education and Poetry

F. Todd Goodson

In one of the more unique manuscripts to appear recently in *Educational Considerations*, Alex Romagnoli provides a rich, speculative discussion of the nature of the grade point average (GPA) in education and the batting average in baseball. In a manner similar to the old compare and contrast essays that have long been a staple in secondary English classes, Romagnoli provides a vivid historical background for each of the metrics, one that would make any Junior English teacher proud, and then he moves forward to discuss what we can learn from baseball statistics that might inform our efforts to measure and document student learning in education.

One line from Romagnoli's (2024) work particularly caught my attention. He notes that the GPA "...strictly measures the assessments the instructor created and/or administered but not necessarily the totality of the student's experience" (p. 2). He follows this by pointing out how deceiving something like a batting average of .300 might be. As an example, in 10 at-bats, one hitter might strikeout seven times and hit three singles. Another batter might hit three home runs and seven balls caught just short of the outfield fence. These two batters are hardly "equal" in terms any baseball fan would recognize, but they carry identical batting averages.

We might think we know what a 4.0, a 3.0, or a 2.0 GPA means, but anyone who has spent any time at all examining transcripts knows each one will sustain analysis as well as most poems. In fact, every time I pull up a transcript, I always find surprises. Certain patterns reoccur, but each one is different. Even if I have yet to meet the student behind the transcript, I almost always come away from that document with a relatively deep understanding of the student. At the very least, I have a set of questions and things to explore when we do meet.

To illustrate, let's consider a hypothetical sample student. Let's suppose that, as a higher education administrator, I have become aware of a student teacher who is struggling in a placement. The student has no prior history in the system to suggest concerns, but now I need to know as much as possible about the individual prior to a meeting to discuss future options. Among other sources of information, I will want to look at a transcript.

Here is where Romagnoli's work begins to resonate. Before I even look at the transcript, I will know the GPA is at or close to 3.0 by virtue of the fact the student met qualifications for a student teaching placement. Keep in mind, I already know the student hasn't attracted my attention during the last three or so years, because there is no record of requests for waivers of the GPA requirement. If the GPA were, in and of itself, a highly meaningful metric, about all I could determine is whether the student is in the lower or higher qualifying bands. To be fair, it is worth knowing if the student had a 2.9 or a 3.9 prior to the meeting, but perhaps not for the obvious reason. Anyone working in teacher education for any length of time has lots of stories about students who were, shall we say, marginally qualified by GPA standards but who were very successful teachers. Conversely, we all have instances of students with excellent GPAs who struggled moving from student to teacher (see the manuscript by Milford and Reed in this issue for a discussion of those challenges). The difference between a 2.9 and a 3.9 is, then, a crude and

unreliable indicator for the task at hand. I want to know what the overall GPA is, but that is barely a starting point. The real starting point is a series of questions:

Where did the student attend high school? I confess there is a danger of stereotyping based on geography, but the first question I always want answered is where the student experienced high school. That is simply contextual knowledge, but the more we understand about the educational systems that feed our institutions, the more knowledge we have about the kinds of experiences any particular student brings. Again, in and of itself, the high school attended is meaningless, but it begins to fill in context.

How many hours of transfer credits does the student have? Did the student take concurrent credit in high school? What classes? Did the student attend community college(s)? Another four-year institution? What kind of academic record(s) are presented?

Has the student changed major? It is not at all uncommon for education majors to have started in another field (or as an undeclared major). The follow-up question involves what the grades were like in the first major. It might (or might not) be important to know whether a student left engineering because that student decided to follow a dream to teach after or because of the inability to pass calculus. I want to stress this kind of analysis and interpretation is not about value judgments. Rather, it is about learning what the transcript can tell us and developing questions to seek additional information.

How many withdrawals and/or repeated courses appear? If a student is moving through a program unremarkably and suddenly an entire semester is marked as “withdrawn,” that indicates something important happened in the student’s life at that time. It is entirely possible the problem of the moment traces to that period in the student’s life. A pattern of courses repeated for a higher grade can indicate relative weaknesses in certain areas.

How did the student perform in quantitative/scientific vs. verbal/artistic courses? One student has Cs in algebra and statistics and As in the two composition courses. Another student has As in geometry and biology and Cs in literature and creative writing. The end result for both is 3.0, but they are very different students. The trends a transcript can reveal about a student’s relative struggles and strengths in different types of courses can be invaluable as we work toward the best path forward for that student. Again, this is only captured superficially in the simple GPA formula.

What interpersonal issues might be hinted at in the transcript? When a student with a very strong record in challenging coursework has a low (by the student’s standard) grade in a course with a reputation for high marks across the board, this can indicate a set of possible questions for follow-up with the student and other sources surrounding the student. Sometimes we can see instances that make us think students shut down when they are bored. Other factors could be at play as well.

Are instances of academic integrity indicated? Most institutions have honor code systems in place that yield identifying marks on the transcript. Sometimes those can be lifted by taking an

academic integrity course, but even if the violation is removed, the presence of the integrity course on the transcript is a factor that might be relevant to the present situation.

In the same manner that we might begin the process of interpreting a poem—the way we look at the author’s other work and biographical factors, the way we look at the time period and the critical tradition within which the poem was written, the way we examine theme, setting, tone, and content—all of this is analogous to the way we can interpret a student’s academic history. In the end, it is an imprecise science. Different readers have different levels of skill at interpreting poetry, transcripts, and batting averages. Romagnoli (2024) makes a convincing case for how alternative metrics make the more simplistic number, be it a GPA or a batting average, more nuanced and ultimately more useful. I couldn’t agree more.

The point is that numbers imply precision that is incomplete at best and, depending on the stock we place in them, often illusory. This leads to situations where important decisions are made based on metrics of which we lack mature understandings.

If we wish to move beyond where we are currently in education (and baseball and poetry interpretation too, I suppose) we need to learn to do what the postmodern theorist Foucault (1965) termed “problematization.” That is, we need to take metrics and other data that seem simple and make them complex, not to demonstrate that we are bright or clever, but rather to avoid making short-sighted decisions because we lack understanding of what the metrics mean (and do not mean).

Too often, in my view, we begin with a viewpoint. We can call it a bias or a belief or whatever we like. Maybe “conclusion” is a better term. If we have concluded that today’s students do not read well enough or do math well enough or behave the way they should in social situations or whatever, then it is relatively easy to point to something like NAEP scores or any state’s assessment data or crime statistics as ironclad proof that the conclusion we had before we looked up the particular metric is accurate. If we stir into the mix some anecdotal evidence, well, so much the better.

Except that we can do better, and we should do better. Part of being an ethical leader, policy maker (or sports writer) is having the wisdom and maturity to problematize the simplistic data so readily available to us. To return to Romagnoli’s (2024) conclusion:

There is no ultimate assessment or statistic, in either education or baseball, that will provide a definitive metric which succinctly and infallibly relays understanding and/or achievement. The innumerable factors that impact assessments make such an endeavor impossible, and this article does not argue for the existence of such a metric. No matter how many factors are taken into account, there will always be varying degrees of influence and new/arising factors that complicate the creation of such an assessment. (p. 13)

Romagnoli (2024) notes that baseball has sought out additional metrics that, taken together, help to provide the missing context, a deeper interpretation, of that which we are attempting to measure. I have attempted to demonstrate, through the hypothetical example of transcript analysis toward a particular decision point, that we can interrogate our simplistic data to help us

arrive at what we hope is a point grounded in wisdom and deep consideration of all available factors surrounding the available metric (e.g., GPA). I will admit, it is much easier to do that in a single case of a student about whom difficult choices must be made. Certainly, for that individual the stakes are very high, but we continue to persist in writing legislation and making decisions with tremendous consequences based on reductionist data which lacks context.

References

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