

A Planned Approach to Increase Graduation Rates: The Integration of a Dropout Early Warning System Into a Program Planning Process

On October 28, 2008, U.S. Secretary of Education Margaret Spellings announced final regulations to strengthen and clarify No Child Left Behind (NCLB) by requiring all states to use the same formula to calculate how many students graduate from high school on time and how many drop out. The changes announced to NCLB focus on improved accountability and transparency, uniform and disaggregated graduation rates, and improved parental notification.¹

When NCLB was initially enacted, its primary focus was on student and school assessment and accountability but did not address the issues of tracking the dropout rates within our schools. The new regulations incorporated into NCLB are a reflection of experiences gained over the last six years since the law's enactment and build on work that states are making with their assessment and accountability systems to establish a uniform graduation rate that shows how many incoming freshmen in a given high school graduate within four years.

In order to increase graduation rates, a planned approach is needed. "Dropping out is often described as a process, not an event, with factors building and compounding over time."² Therefore, a state-of-the-art, user-friendly system is needed that allows the continuous observation of data trends, based on the risk factors for dropping out, that indicate which specific problems exist so necessary interventions can be made as early as possible.

To address this challenge, the National Dropout Prevention Center (NDPC), Olympic Behavior Labs, Microsoft, Sypherlink, and Choice Solutions have developed a working prototype of a web-based dropout early warning system (DEWS) that automatically and nonintrusively facilitates real-time identification of dropout potential for students in grades K-12.³

Not only does this approach to DEWS track the enrollment status of the student, a key indicator for school failure, it also provides a comprehensive systemic approach that uses predictive analytic models to identify high-risk students, recognize student trends and patterns, and predict potential dropouts. In addition, DEWS is integrated with the Program Assessment Review (PAR) process, developed by the NDPC, which collects qualitative data, including data collected prior to and during multiple site visits to schools. PAR, a comprehensive program planning process, continues with an analysis of all data, both quantitative and qualitative, to assist local schools and communities in the identification of evidence-based strategies and intervention programs designed to increase the graduation rate.

The systemic approach is multiphased and identifies the student by examining the root causes associated with dropping out of school. In addition, DEWS will be able to identify specific clusters of students (e.g., by grade levels, academic areas, or classrooms) and/or schools most in need of improvement. The DEWS/PAR systemic approach consists of numerous specific tasks such as: identification of high-risk students; predictive scores for each student or cluster of students; school and community assessment of readiness for school improvements; use of intervention strategies and research-based programs; and planning, implementation, and evaluation processes. Specifically, these tasks are included in the four phases illustrated below:

- Phase I. Predictive Analytic Models
- Phase II. Program Assessment and Review
- Phase III. Planning and Implementation of Intervention Programs
- Phase IV. Monitoring and Evaluation



Phase I: Predictive Analytic Model

Phase I of the DEWS/PAR approach identifies the struggling student by examining the root causes or risk factors associated with dropping out of school. These risk factors may be present in any one of the four domains common in the research literature—individual, family, school, and community. However, the risk factors most often used in the predictive analytic models are the individual and school factors because those indicators are more commonly found in most databases managed by local school districts or state education agencies. Typically, these indicators include attendance; achievement scores in reading or language arts; math scores; behavior measurements; and other indicators such as retention, overage, disabilities, or grade point average. DEWS/PAR is further enhanced by its capacity to capture data from other relevant sources (e.g., law enforcement, social services, health services) describing pertinent data about students and/or families.

In addition, the DEWS system will be able to identify grade levels as well as schools most in need of improvement. The analytic tools of DEWS will also provide information that illustrates when needs are at significant levels to warrant interventions across the entire school district.

Phase II: Program Assessment and Review

Phase II of the DEWS/PAR systemic approach provides an evidence-based structure for the school and community to complete an assessment of the current strategies and existing programs for high-risk students. This structure, Program Assessment and Review developed by the NDPC, has been utilized by dozens of schools and communities since 1990. This phase will capture the overall conditions and environment of the school and community and the commitment of these leaders to increase the graduation rates. This phase also is designed to determine if the district culture or schools are ready for school improvements.

Phase III: Identification, Planning, and Implementation of Intervention Programs

The third phase is the actual use of the student predictive data to address the intensity of the need for the individual student, clusters of students, or groups of students with similar characteristics. Following the recommendations from the recent IES *Dropout Prevention: A Practice Guide*, a **targeted intervention plan** is used to address the needs of individual students or clusters of students.⁴ Likewise, a **schoolwide intervention plan** is used to address the needs of students when they represent large groups at grade levels or the majority of students in specific schools. Effective programs and strategies are selected and implemented at both the individual student level and the school level as needed.

Phase IV: Monitoring and Evaluation

This final phase is the responsibility of the local school district to monitor and evaluate the intervention programs and strategies. These evaluation procedures may be completed internally or shared with third-party evaluation organizations. The program evaluation results, utilizing data from the DEWS model and other contextual information, will provide evidence to maintain the current interventions or make modifications and revisions as necessary.

Notes

1. In accordance with NCLB New Rules, a State and its LEAs must report under section 1111(h) of the Act (annual report cards) graduation rate at the school, LEA, and State levels in the aggregate and disaggregated by each subgroup described in § 200.13(b)(7)(ii).(ii)(A). Beginning with report cards providing results of assessments administered in the 2010–2011 school year, a State and its LEAs must report the four-year adjusted cohort graduation.
2. C. Hammond, J. Smink, & S. Drew: National Dropout Prevention Center. D. Linton: Communities In Schools, Inc. (May 2007). *Dropout Risk Factors and Exemplary Programs: A Technical Report*, p. 2. Retrieved from http://www.dropoutprevention.org/resource/major_reports/communities_in_schools.htm
3. The system's design ensures compliance with Family Educational Rights and Privacy Act (FERPA) regulations and database security.
4. Dynarski, M., Clarke, L., Cobb, B., Finn, J., Rumberger, R., and Smink, J. (2008). *Dropout Prevention: A Practice Guide* (NCEE 2008-4025). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from <http://ies.ed.gov/ncee/wwc>

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