Montana's Early Warning System

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Montana EWS Program

Goal 1: Create and maintain a statistical model that accurately predicts the odds of a student dropping out (model development).

Goal 2: Identify at-risk students before they drop out (professional development).

Goal 3: Help schools that opt-in to the program to identify factors that are impacting each student's dropout risk to prioritize and target interventions according to individual needs and school priorities (professional development).

Goal 4: Help schools understand dropout risk trends at the school level to make decisions regarding policy that may influence dropout risk (professional development).

Evaluation Procedures

- **Task 1**: We know the ability of the model to predict dropout. Hence, we investigate the propensity of the model to predict graduation to gauge the efficiency of the model.
- **Task 2**: We investigate the degree of implementation of the model in schools. Has access to EWS data inspired policy and increases in student supports?
- **Task 3**: We focus on how robust the student outcomes are in these schools and the impact of dropout interventions on graduation and postsecondary enrollment.

Comparison of EWS and non-EWS high schools (N=185)

Academic year	School characteristic	High schools that used EWS	High schools that did not use EWS
2012-2013	Mean number of students	715	224
2012-2013	Share White	0.67	0.79
2012-2013	Share AIAN	0.23	0.13
2012-2013	Share Econ. Disadv.	0.48	0.40
2019-2020	Mean number of students	362	233
2019-2020	Share White	0.62	0.77
2019-2020	Share AIAN	0.25	0.10
2019-2020	Share Econ. Disadv.	0.56	0.46

How did dropout rates compare for students in EWS adopting and non-adopting schools ?

4-year graduation rate for cohorts entering 9th grade AY 2009-2010 to AY 2017-2018		
	All students	Native students
Students with any EWS score	89.0%	75.2%
Students never with an EWS Score	86.9%	69.4%

EWS associated with 2.1% higher graduation

EWS associated with 5.6% higher graduation

Conclusions: Processes

We conclude that the EWS model did work as intended. The degree of EWS implementation is localized and based on multiple interrelated factors. ***The core of these factors is how the district finds value in the data and what they decide to do with the data.*** Given the scope of these factors, OPI support was seen as a catalyst to school level change.

The rollout of the program reflected a staged process which focused on professional development for high adoption schools in addition to the online tool. The design of the tool was found to be adequate, like online tools associated with the MAPS test administration. The tool was found to be accurate among users.

Scale should meet identified need and capacity for the program to be successful. Some schools do not have a defined need for the program, others do not have the priorities. ***At the state level, the scope of the program (access to tool among all kinds of adopters) has eclipsed.*** This allows us to focus on existing schools (Professional Development).

Scale, capacity, and priorities will continue to inform school level implementation and information future rollout of the EWS program.

Conclusions: Outcomes

- **The EWS is an effective way to identify students** at risk of drop-out, with scores that are highly associated with actual behavior

- **Schools** that use the EWS tend to be **larger** and **have more disadvantaged student populations**

- Although these schools on average tended to have lower graduation rates, **students with EWS scores were more likely to graduate**

- **The more a student had been in the EWS, the larger the effect.**

- It appears that **the EWS helps school identify students in most need of extra support.**

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