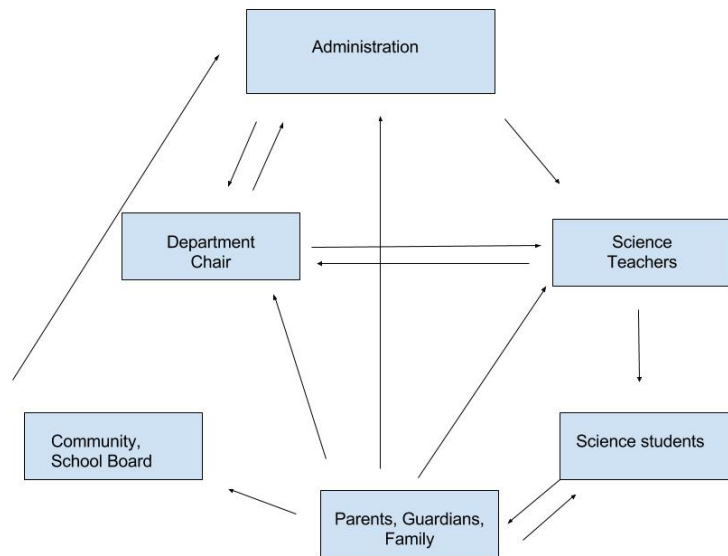


Building a shared vision of change; an analysis and plan

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System components



At the top of the system components diagram is administration. Administration includes all administrators that oversee all aspects of the charter school's operation. From athletics, to counseling to academics, the administration team's decisions ultimately influence the behavior and operation of every other system component below it. As can be seen in the system component map above, administration's curriculum and/or instruction decisions are directly presented to the science department chair, as well as to the science department teachers (either directly by administration, or by the department chair in lieu of administration).

The science department chair acts as an envoy between administration and science department teachers. The science department chair communicates science teacher concerns to

administration, and also relays administrative information back to the science teachers. The department chair's role is to advocate for science teachers, and ensure that concerns with curriculum and instruction in the science classroom are voiced, and that administration feedback to those concerns is obtained. Additionally, the science department chair's role is to ensure that whatever administrative decisions have been made regarding curriculum and instruction, are implemented in individual science teacher's classrooms.

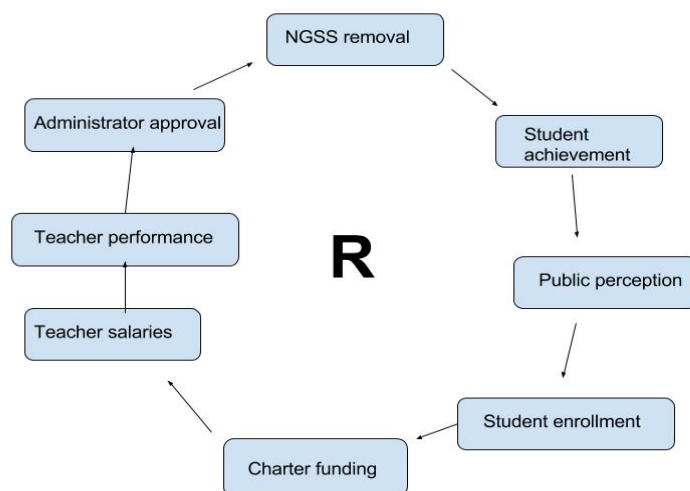
The science teacher is required to implement curriculum and instruction decisions made by administration. While the individual lesson planning is at the discretion of each individual science teacher, each teacher must adopt the curricular vision set forth by administration. For example, if administration requires the science department to adopt a student-centered approach to teaching, then individual science teachers must plan lesson sequences that ensure the implementation of a student-centered curriculum. Science teachers are also responsible for the achievement, support, motivation and engagement (among other things!) of their individual students.

Science students are required to follow the sequence of lesson plans presented by the science teacher. The science student of course is unaware of curricular requirements put forth by administration, and thus does not have the opportunity to voice concerns with the curriculum. Science students are required to participate in and complete all lessons and activities that are planned by the teacher. Science students communicate daily with their science teacher, but do not normally communicate with other science teachers, the science department chair or the administrative team. Students also communicate daily with their parents, guardians and family members. They may share achievements from class, or describe activities or lessons that they found interesting or not.

Parents, guardians and other family members communicate with their science students daily, and may also communicate with members of their community regarding achievements or learning activities their students are participating in. Additionally, when parent/guardian concerns arise, they may communicate with all components of the system, but are most likely to communicate with the science teacher, the science department chair, or even administration. These communications may ultimately make their way to the school board, who ultimately governs administration's decision-making capabilities.

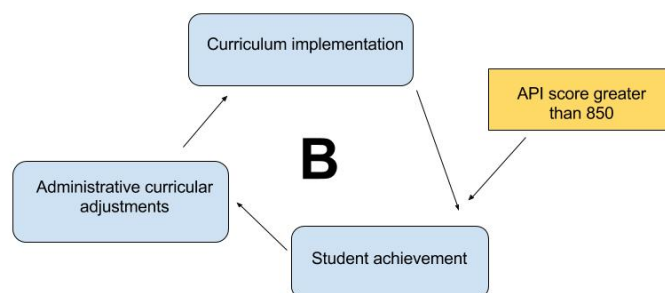
Finally, the community at large (including the school board) ultimately communicate concerns or positive feedback directly to the administrative team. As mentioned above, the school board (under significant influence by the community at large) ultimately determines the next steps of administration, and governs decisions related to curriculum and instruction.

Reinforcing causal loop



The reinforcing causal loop above shows the expected growth for the charter high school following the removal of the NGSS. Removing NGSS implementation from the school site encourages student achievement, since instruction returns “back to the basics” and students have a more defined avenue in which to access content materials. As student achievement increases, so does public perception of the school. The higher the achievements of students, the more likely that the public will wish to send their high school aged children there. As the school site is a charter school that relies on state funding, the higher the number of enrolled students, the greater the amount of funds that will be afforded to the school. Not only do increased funds result in the means to purchase additional school-related requirements, but there will also be funds available so that teachers may be able to negotiate higher salaries. With higher salaries, teachers are likely to have a more positive outlook on their jobs, and will be more likely to want to continue developing lessons and activities that continually reinforce student achievement. As teachers work hard to ensure the achievement of their students, administrator approval of teacher performance is enhanced, and thus administrators not only approve of teacher performance but also of the decision to remove NGSS implementation in the first place.

Balancing process loop



The balancing process loop above shows that the charter school site wants to preserve its Academic Performance Index (API) at 850 or above. In essence, the site will make any adjustments necessary to the curriculum in order to achieve this. In other words, the API is a direct result of student achievement. If student achievement is high then administration responds by requiring the continued implementation of the current curriculum. However, if student achievement is low, administration responds by implementing curricular modifications that will circumvent this low achievement in order to restore the desired state of an API of 850 or above.