



Review Paper

Student-Based Budgeting: Customer Centeredness and Justice in Educational System

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Abstract

Along with financial reforms in the educational system, and holding schools accountable for student achievement, in recent years many educational areas in the United States have taken steps towards student budgeting system. Student-based budgeting system is a new mechanism, which provides schools with financial resources based on the number of students and their needs. It aims to increase the financing equity, improve budgeting and accountability, increase transparency in order to improve student performance and educational justice. In order to do so, in this article, through defining the concept of student-based budgeting, we have examined its functions, aims, elements, challenges and its assistance to the educational system. Although this novel way cannot be considered as a panacea to all the problems in the educational system, it can pave the way for profound reforms in educational systems as well as school. At last, some practical suggestions have been offered to implement and administer student-based budgeting.

Keywords: Student based budgeting, fair funding

Introduction

One of the issues that have long obsessed teachers and educational staffs' mind is the equity in education and providing equal opportunities for all students to obtain educational standards. On the other hand, the excessive local and national attention on accountability, made the educational areas and states organize some plans to maintain all school to a same level of high standard. However, if the resources are distributed unequally, and the schools are not given the leeway to solve the students' academic problems based on some special need priorities, it is nonsense to expect the same progress levels in all schools in an area¹.

The fact is that without an equal and fair distribution of budgets among schools, meeting educational justice is worthless. The reason is that some take a large slice of the cake (budget) while others take a smaller one. Thus, quite a number of people in charge, policy makers, and educational reformists state that modifying the methods of resource distribution to schools improve the equity in access to resources in educational areas¹⁻³.

Also, in recent years, the urban school districts such as Seattle, Houston, San Francisco Cincinnati, and Hartford in the United States have moved towards student-based budgeting, which provides a constructive block for students budgeting³. The fact is that equitable distribution of funds can create equal opportunities for all students¹. Therefore, educational theoreticians, by introducing the concept of student-based

budgeting, educational theoreticians hope that by distributing fair and equal funds to schools based on the needs of students - in horizontal equity (equal treatment with equal students) and vertical equity (more cost for students with additional needs) , finally realize student educational progress.

Staff- based Budgeting

Staff-based formula allocates most school employees, including teachers, managers, and school counselors to schools, based on the increase, or the total number of students or a certain type of students⁴. In other words, the input formula allocates staff and other resources to schools, primarily based on the number of students in the school, along with other factors that are less important⁵. For example, a school may receive one teacher for every 24 students, an assistant manager for every 400 students, and a bilingual teacher for every 10 to 50 learners of English. When Schools are within this range of students, they either gain or lose resources⁶. This will lead to some inequities in the distribution of funds among schools⁵. For example, the addition of a student will lead to creation of a new job. Assume that the staff-centered allocates one teacher for every 25 students. The entrance of the 26th student means that another teaching position is required and the school will end up with two classes of 13 students. Similarly, if the formula assigns a guidance counselor for every 400 students, a school with 400 students will receive one school counselor and a school with 401 students will receive two. In school districts, which apply the staff-centered formula, even after considering the kinds of

students, it is not uncommon that some schools spend twice as much for every student^{7,8}. In addition, the old formula staff-based funding supports smaller schools, because staff such as managers, secretaries, and librarians is allocated to all schools regardless of their size. In small schools, the resources are distributed among fewer students, which lead to a bigger share for each student¹. School budget analysis also implies that the differences in funding levels using this formula are mainly due to the size of the school, the staff, the special programs, resources for special groups of students, and the costs of physical plant differences^{5,9}. Studies have shown that the educational districts which have moved from traditional models of staff-based budgeting to student-based budgeting models had more equality in resources among the school districts⁵.

Student-based budgeting

In recent years, the educational policy makers consider staff-based distribution as inefficient, and instead support a system, which distributes resources among schools using a student-based formula². This approach is known by different names - student-based budgeting (BBS), weighted-student funding (WSF), fair student funding- which distributes the budgets based on the special combinations of the students in dollar, not based on the staff position. Student-based budgeting provides a fairer and more reasonable budget distribution among students and school with different needs and also makes it possible to arrange school budgets for educational needs in a better way⁵. Under this formula, the schools with larger student needs are given more budgets per student and we can make sure that all schools will receive what the students need for their education.

The idea of student-based budgeting is the inclusion of all basic educational needs of students in a formula, which distributes the financial resources rather than staff. The system gives weights to students based on the different learning needs and the costs to serve them². This formula reminds us that students are the main customers of the education administration and their needs must be met prior to anyone else's needs⁵. This model is based on the assumption that the amount of funding that the school receives for each student should reflect the educational needs of students.

From a theoretical viewpoint, student-based budgeting requires educational districts to modify financial allocation to schools according to enrollment rates and demographic changes; school districts allocate all funds based on the number of students enrolled in a school. If the student-based budgeting is applied this way, school funds can meet the needs of every student in any school. In the student-based budgeting system, students are funded rather than, schools¹. Distribution methods in this system are as follows: all students receive a minimum level of funding, which is often referred to as " foundation amount ". Then students with additional needs, including students with low performance or English language learners requiring additional services to achieve the desired level (these two are among the issues that are included in the formula), receive more funding.

Then each of these categories is given weight. Finally, the fund is given to each school based on predicted school enrollments and the need for students (i.e. category that the students fall into. For example, English language learners, poverty, etc.). An example of this formula is presented in figure 1. The key concept of student-based budgeting formula is the subject categories and the weight that should be given to them.

Various categories and weights are used in different school districts in the United States. Common categories included in weights are special education, poverty, limited English proficiency, vocational education, grade level, gifted education and base weight. For example, if school district managers make the strategic decision to invest more for students who are English language learners, school districts can give more weight to all students². In the process of determining the categories and weighting them, some key questions permanently obsess the minds of those involved in the education system. Among these questions are: i. What weight should be given to someone or something? (For example, what characteristics and features best represent the needs of the student and should be weighted, features such as special education, poverty, activity, important indicators, school, grade level, school performance, etc.). ii. Which group or groups of students should demonstrate basic weight (0/1)? iii. Who should determine these weights?

In fact, it should be said that, there is no reason and rationality on the set of right coefficients to use in a student-based budgeting, and we do not have access to reliable information to answer the questions. However, the advantage of the student-based budgeting is that the investment in students is based on explicit characteristics and not implicit ones⁵.

The aims of SBB

The main purpose of the SBB is to improve student achievement by allocating funds to schools based on the educational needs of individual students. In addition, SBB system also serves other purposes, including:

Equity: In this method, equal funding is allocated for each student based on their learning needs using student-centered SBB formula¹⁰. Nevertheless, it should be mentioned that equality is just one of the reasons why school districts have adopted SBB. When we talk about equality of resources, we actually talk about how the funds are distributed to schools and students with various characteristics. It is important to do it fairly. However, it is much more important to ensure that there are adequate resources for the education of all students⁵.

Improving Budgeting and Accountability

School managers and members of the school communities know better than anyone else what they need to improve student achievement. SBB provides more opportunities for schools and

communities to make the best decisions for their students and their success¹⁰.

Transparency: SBB has removed the complex staffing ratio and provides funding through a simplified allocation. Instead of hiding the difficult choices inherent in budgeting, the new formula pulled the options out and made them available for everyone to evaluate¹⁰.

SBB Requirements

Equality, independence, and transparency that provide funding based on student, do not spontaneously make schools and school districts better. The ultimate success or failure of the application of this system is subject to provision of infrastructure, such as building up capacity and support of school principals, which should exist in a system prior to performing SBB⁵. SBB requires some fundamental changes in the administration and raises some questions regarding how to combine flexibility supervision and efficiency, how to change the attitude of the administration toward the vision of training and support for school managers, and how to ensure that the additional budgeting responsibilities do not interfere with the managers' efficiency to focus on instructional leadership⁸. Under this system, a philosophical change occurs which makes the organizational pyramid upside down; school administrators are at the top rather than at the vertices. They inform the central

office about what they need. Consequently, there needs to be huge cultural and structural changes⁵.

As mentioned earlier, SBB system has some prerequisites such as: Changing role of the central office: The consensus is that the SBB system requires changes in attitudes, roles, and culture of the central office. Among these changes are: i. Changing in the culture of the office: Head office staff should change their attitude towards "We serve our schools". In this change, the managers are located at the top of the pyramid and inform the central office what they need. ii. Changing the role of the staff in central office: job descriptions for many staff at the central office should change. iii. Providing intensive budget help and information regarding the best measures: there needs to be a meeting for school districts and schools to review the budgeting process systematically, and if necessary, provide operational guidance to assist managers in budgeting, budget realization reports, etc. iv. Separating support from evaluation: there should be a border between supporting schools and evaluating them so that managers are more willing to ask for support when they need⁸.

Giving school principal's greater flexibility in the use of resources: school districts - especially schools - should be allowed to decide the best way to improve learning outcomes of students with special needs⁵.

$$\text{Weight to student in school A} = \frac{\text{the real costs of school A in dollar}}{\text{the average cost of educational district based on the weight for school A}}$$

$$\text{the average cost of educational district based on the weight for school A} = (N_{\text{total}} \times \text{PPE}_{\text{non-categorical}}) + (N_{\text{sped}} \times \text{PPE}_{\text{sped}}) + (N_{\text{voc}} \times \text{PPE}_{\text{voc}}) + (N_{\text{pov}} \times \text{PPE}_{\text{pov}}) + (N_{\text{ESL}} \times \text{PPE}_{\text{ESL}}) + (N_{\text{gift}} \times \text{PPE}_{\text{gift}}) + (N_{\text{gl}} \times \text{PPE}_{\text{gl}})$$

N_{total} = the total number of students in a school
 $\text{PPE}_{\text{non-categorical}}$ = less definite costs, the average costs of school district per student (the costs that are allocated to the categories below)
 PPE_x = the average additional costs of school district per student, for the number of students in each category
 Categories:
 Sped = special education
 Voc = vocational education
 Pov = extreme poverty, or students who receive free lunch
 ESL = English as a second language
 Gift = gifted and talented
 Gl = grade level

ES

Source: Adapted from Miles and Roza, (2002)

Figure-1
The formula of weight to student

Building up capacity and educating school managers and principals: if there is no competent individual among the school managers and teachers, creating flexibility in allocating the resources simply causes inequity, and make the schools susceptible to failure. That is because it requires managers who know how to organize resources so as to support effective teaching. Furthermore, success in strategic decentralizing primarily depends on the manager's ability and capacity. Thus, the manager's ability and capacity is an area, which needs to be concentrated by the school districts that are moving towards the SBB. In addition, strategic decentralization requires different attitudes of the central office and organizational structures, as well as new tools to strengthen management capacity⁵.

The existence of a rigorous information system: Since the determining the amount of budgets in SBB system is based on the anticipated number student's of students and their needs, it is necessary to have an information system through which more accurate predictions can be made.

Anyway, with adequate support⁵ like educating managers to administer SBB⁸, the SBB can be a constructive block for the systematic changes which initiate from fair distribution of resources so that all students will have an equal chance to achieve challenging standards that they deserve⁵.

The principles of SBB: SBB is based on simple principles, which include: i. People closest to students will make decisions about educational programs, support, and staff options, and budgets. ii. Schools will be empowered, responsible and accountable for results: fair and comprehensive evaluation of the school will provide useful and timely information for principals and teachers. iii. Students can count on equal and transparent financing: different students have different educational needs and funding should reflect their needs. In order to ensure that funding decisions are clear and observable for all school, budgets will be clear¹⁰. iv. The new budgeting system will follow each student in any school he attends. v. Each student will receive funding according to his educational needs. vi. Schools will be given more flexibility in how they allocate funds, along with more responsibility and more accountability for dollars in terms of results¹⁰.

Challenges and benefits of SBB

Hornbek believes that SBB does not have any disadvantages, and it is always accompanied by a sense of trust. According to him, the goal in SBB system is to raise schools to a level that that they are responsible on their own. In this system, administrators are given a great deal of freedom and control over their budgets⁵. Ideally, a student-based budgeting can give school managers the flexibility to link resources to the needs of their school⁸. However, as in most finance distributing systems, SSB has its own opportunities and challenges⁷. The opportunities and challenges are briefly presented below.

Challenges: Potentially painful central office transition towards SBB: The implementation of this system will require major changes in the central office⁷.

Complexities: adopting a meaningful formula about what should be given weight and how much weight it should receive is a challenging issue^{5,8}.

Fiscal oversight, compliance, and accountability: the system requires rethinking about accountability to ensure that managers are held accountable for the results⁷.

Increased data need: SBB requires more and better data. Estimating budget in this method demands prediction of the enrollment rates, and the number of students that are in each specific category⁷.

Principal capacity, education, and supporting them: principal capacity is the key to the success of SBB, which makes this educational program vital⁸.

Added leadership burden⁷.

Finding flexibility in by the Federal, State, and Union rules: flexibility of the principles in scheduling, hiring and firing are often constrained by union contracts⁸.

Evaluation versus support: hardworking principals may be reluctant to ask for support, when the office that supports them, evaluates them as well⁵.

Achieving true equality in funding: Although SBB system is designed to distribute funds according of students' needs, the same thing - achieving true equality in funding - is a challenge itself⁸.

Benefits: Help achieve educational equity: In this budgeting system both horizontal equity (equal treatment with equal students) and vertical equity (more costs for students with additional needs) are considered in order to direct the resources towards the students and schools with greater needs⁵.

More support for students: this system concentrates attention towards students and meeting their needs⁵.

Increased transparency: it raises questions from the beneficiaries about the amount, distribution and guidance of resources throughout the organization⁷.

Equity in financing: Students with similar needs receive the same funding; regardless of the school they attend^{7,8}.

Flexibility in resources: when the principals are given dollars instead of fixed packages, they will be more able to organize the resources in such a way that the school needs are met in the best

possible way. However it is given that the contract, regulations and policies are revised and modified⁷.

Giving school principals independence: SBB gives managers a direction which allows them to organize their budgets in order to support the plans that are more important for their schools (The system also gives the principals the flexibility to link their resources to their school needs⁸.

Enabling, supporting managers and encouraging their creativity: Another advantage of this system is the development of appropriate management and supporting systems^{7,8}.

Since the school managers are aware that, under the student-based formula, the each individual student is important to schools, they will become experienced in enrolling students⁵. Thus, they should always look for ways to maintain their school enrollment rates. SBB is a key element of a comprehensive approach to school reforms and school districts are able to move towards a more innovative and more strategic culture⁵.

Delegating decision-making to schools supporting education-based and service-based culture: by approaching towards student-based budgeting, the central office should shift towards a service-based culture and support schools rather than ordering them what to do⁵.

SBB and educational justice: In the last few decades, governments have seriously tried to reduce inequities, especially in educational organization. The reason is that inequity in education is basically demoralizing and is the origin of political, social and economic inequities in societies. Inequity in education covers many areas (Including inequities in educational opportunities, attainment, etc.) and allocation, and distribution of financial resources is among the inequities areas in education. Hence, in addition to funding the education system, policy-makers and decision-makers must also consider how to allocate these resources so that both the horizontal equity (equal treatment with equal students) and vertical equity (pay more for students with additional needs) are considered in their budget distribution among school areas². Maybe it can be argued that the Inequity in the allocation of educational resources is of more importance than other areas. That is because these inequalities can lead to the emergence and spread of other areas of educational inequality, including inequality in educational achievement.

Thus, the student-based budgeting has been considered in the United States in order to decrease inequities and increase educational justice. Regarding the educational justice, Simons (2010) states that in a student-base budgeting system, both horizontal equity (equal treatment of equal students) and vertical equity (more costs for students with higher needs) are considered in order to direct the resources towards the students and schools with greater needs⁵. Foley also claims in a student-based budgeting, equality requires inequality in the costs and

funds per student. This new allocation method can be a tool to increase the equity in expenditure in schools. Because it makes funding levels clear and involve modifications in the formula to increase or decrease the resources².

By changing the traditional "one-size fit all" approach, SBB Organize the resources in a way that serves the students and their special needs⁵ and ensures that the funds are allocated in a fair and objective manner¹¹.

Conclusion

The aims of SBB are obvious: Achieving greater equality, using the resources where needed and giving school principals the flexibility to link resources with school needs⁸. Although student-based budgeting system cannot be considered as a panacea for the challenges facing education in urban areas, it's believed it will support the environment in which other modifications occur¹¹. Potential development-oriented SBB originates from the fact that it can create conditions that support the school flexibility.

In addition, SBB with strategic decentralization reform strategy gives managers the flexibility to budget around the needs of their school and also provides capacity and accountability to use the flexibility⁵.

As discussed previously, a change in the distribution of resources to schools per se cannot have a profound effect on education. In SBB approach where managers, who have the knowledge and skills to use resources strategically, are given the real flexibility in how to use the resources, can provide the infrastructures to make reforms in school areas⁵. In other words, the success or failure of a student-based budgeting system depends on the triangle of central office (changes in the structure such as strategic decentralization, changes in attitudes and roles of staff in the Central Office), schools (competent principles, educational leaders and teachers the necessary skills), and the support of the local community. SBB can influence academic achievement, capacity and skill of the school principals, school culture improvement, educational system reform and eventually achievement of educational justice. Nevertheless, the impact of SBB largely depends on how it is applied which means that fund distribution to schools based on SBB formula will not help unless principals have the flexibility to use resources. Excessive flexibility will not help unless principals have the skills and knowledge to use resources strategically so as to improve learning and teaching, and there should be a strong accountability system to provide the responsibility, support, financial security, and direction. Together, these three elements of SBB - real flexibility in terms of resource use, capacity and competence of the principals, and accountability- can potentially create schools which are strategically influential and flexible, and can provide students with high quality education and support⁵.

Managerial Implications: Like any other financing systems, SBB has its own advantages and disadvantages. Many of the problems that have plagued student-based budgeting, like the accuracy of predications regarding enrolment rates or the lack of flexibility imposed by union contracts, are also challenges for other financing systems. The following recommendations are provided to implement student-centered budgeting.

Changing the central office: the performance of SBB will require changes in student attitudes and structures in a way that focuses on supporting and accountability. If school districts decide to implement SBB, they should take steps to change the culture of the districts and improve cooperation between the financial and educational sides in the central office⁸.

Adopting a strategy for solving the dual role of principals: SBB raises philosophical issues about whether managers should be responsible for training and finance. On the one hand, does the finance department make managers far from the of educational leadership? On the other hand, can they only deal with education without having control over the operational matters? School districts should review their management skills and see whether they are expected to perform this dual role. If so, how can they plan to train and support them to be successful?⁸.

Creating more flexibility in the use of resources: Allowing managers to use resources in a flexible way is the core of SBB. But school districts are facing great difficulties in building flexibility. In many respects, this flexibility and leeway is banned by the laws of federals, states, and unions, and sometimes by the internal policies of school districts. If school districts do not think of a way to solve this problem to create more flexibility for managers, SBB cannot realize its potential⁸.

Considering the impacts of the financial crisis: by lowering the incomes and budgets, school principals have less freedom in the use of resources, because they may not be able to meet the basic necessities for managing schools.

And school districts should answer this question: if something decreases, who is in the best position to decide: central office or schools?⁸.

Predicted versus real enrollment: Hartford school districts have tried to predict school enrollment for the coming year. The difference between the actual enrollment on the first of October marked and the predicted enrollments which have already been calculated by SBB formula may lead to the fact that several schools receive more funding than they need. Although there are some tradeoffs to balance the previously approved faineance, it is possible to update the predictions in spring and summer enrollment and make some adaptations based on the exact enrollment, which is in line with SBB principles¹¹.

Establishing a student-based budgeting consortium: many areas need to be reviewed. The consortium can help build capacity in managers, develop and expand weights, and evaluate student-based budgeting⁸.

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