IPI Research Summary B:
Strategies for Effective Implementation of the IPI Process

We began collecting student engagement data using the Instructional Practices Inventory in November, 1996. Since that time we have had the opportunity to make hundreds of thousands of engagement codes in thousands of schools across the country. We have also had the opportunity to work directly with scores of faculties as they studied and learned from their engagement data. Since the early 2000s, approximately 23,000 educators have completed the IPI Level I Workshop that prepares them to use the IPI Process in their schools. This brief summary of key strategies is grounded in what we have learned about the effective implementation of the IPI Process during the past 16 years.

Experienced educators understand there are no "silver bullets" or "quick fixes" in our complex world of improving learning for students—the IPI has never been described as such. We know far too much about school improvement and instructional change to make such irresponsible claims. Every thoughtful researcher and every "in-the-trenches" teacher understands the difficult challenge of making a significant impact on student learning. Each effective process/strategy, however, adds to our ability to impact learning and some of those strategies are more significant influencers on student academic success than others. Findings from our quantitative studies of the relationships between IPI cognitive engagement data and achievement parallel findings from other studies of the past two to three decades, i.e. increasing engagement and higher-order deeper thinking during learning time and conversely reducing disengagement during learning time positively influence student academic success. For a summary of that discussion see the IPI Process White Paper entitled *IPI Research Summary A: IPI Data and Student Achievement on High Stakes Tests.*

Given that engagement and certain forms of thinking are important factors in learning and that the IPI Process allows a faculty to identify and study cognitive engagement data, clarification of those factors that are most directly related to successful implementation of the IPI Process is of value to schools using the IPI Process. This paper delineates what our 16 years of empirical and anecdotal data indicate are critical strategies a school faculty should consider as they implement the IPI Process. The greater the implementation integrity to these strategies, the greater the likelihood the school will see positive academic results from their use of the IPI. The following strategies are listed so a school can assess the integrity of their IPI implementation for each strategy. Collectively, these strategies represent our best evidence of how to implement the IPI Process with fidelity and expect positive changes in engagement across the school.

IPI Implementation Strategies

- **Create a School IPI Team.** This team of four to five teacher leaders (more in larger schools) must be highly respected by their peers because they will take the lead in the collection, organization, and study of the IPI data. These teacher leaders will "champion" the study of cognitive engagement for their school. They become the central key players in the study of engagement and organize and coordinate the work of other IPI data collectors if the school has more than four or five data collectors.

- **Educate the Faculty about the Process.** The IPI Team should begin the process with a faculty orientation that includes discussions about the IPI Categories and the data collection process. The fact that the IPI is a teacher driven, non-judgmental or evaluative process, must be addressed. Subsequent implementation of the process must reinforce the assurances that the process is teacher driven, teacher empowering, and hold-harmless. The opportunity to subsequently study objective, non-judgmental data about cognitive engagement should eventually dissipate concerns about the process. In schools with high levels of trust and student-centered focus, teacher comfort with the process is quickly achieved; conversely, in schools with low levels of trust and student-centered focus, comfort levels evolve more slowly.

- **Support the IPI Team and Process.** The school principal must be well versed in the IPI Process, which means the principal has completed the IPI workshop and thus developed the capacity to

recognize cognitive engagement and the commitment to support the work of the IPI Team. They should communicate to faculty their understanding of the process and support of the process. They should engage in the study of the data along with the faculty, not lead the study of the data. That leadership role belongs to the IPI Team members. They should facilitate the work of the IPI Team, particularly the necessity to meet with the faculty and study the data after each data collection.

- **Participation in IPI Data Collection by Principals.** School administrators should not participate in the IPI data collection process because their involvement will generally preclude the faculty's ability to embrace the process as hold-harmless, non-judgmental, and non-evaluative. Because school administrators in all states are responsible for personnel supervision and evaluation, they cannot skirt the importance of observing and discussing basic factors such as student engagement and student thinking skills, but all discussions should be based on observations, practices, and strategies separate from the IPI data collection process. Simply put, administrators should not use the IPI Categories per se as the basis to collect supervisory or evaluative data. The IPI Process was not developed for, nor should it be used for, data collection that is supervisory or evaluative in nature. And it is clearly evident that when administrators have violated this premise, the positive value of IPI Process has been compromised, and usually totally negated by the increased level of mistrust between staff and administration. There are too many strategies for principals to use to gain evaluative insight to feel the necessity to violate the integrity of the IPI Process.

- **Collect Data Multiple Times per School Year.** The IPI Team should work with the principal to establish multiple data collection days per year. One data collection a year is generally considered a "waste of time." Two data collections a year barely create a level of faculty awareness of about the importance of engagement and do little to enhance faculty competence in creating quality engagement in the classroom. Three data collections and subsequent faculty study of the data tend to move the school forward with enhanced cognitive engagement. Four data collections and subsequent faculty study seem to have the greatest impact on enhancing cognitive engagement in the classrooms. Some schools collect data five or more times a year and we have little evidence that such steps make enough change to warrant the effort and time. Therefore, think "quarterly" when considering the number of data collections and faculty collaborative study of the data per school year.

- **Inform the Faculty of Upcoming Data Collections.** The IPI Process is grounded on the premise that teachers will be more open to learning from the data when they are the empowered to "own and learn from" the data. A feeling of ownership and comfort to learn from the data is less likely when the data are collected on a "surprise" schedule. Build ownership with the faculty by making the process as transparent as possible. Many IPI schools place the data collection dates on the school calendar and simply remind the faculty of those dates prior to data collections.

- **Collect Systematic, Proportionate Samples.** Data collected by the IPI Team is based on a consistent observation pattern. A classroom is selected to begin the process and then the data collector proceeds systematically throughout the school making continual loops of that pattern. Data should be collected for the entire school day so all curriculum (classes) are observed proportionately and as much data as feasible is collected. Further, if the school has an alternating day curriculum (schedule), then the data collectors should collect data for two days back to back so the dataset represents the entire curriculum. When class schedules change, thus evolving students from one content area to another, a grace period of about 5 minutes is given at the start and end of the timeframe for that content. In other words, for class periods in the middle school and high school and for shifts from one content area to another in the elementary school level or movement from a basic classroom teacher to a "specials" teacher such as music, art, or physical education, collect data only between those five-minute bookends for the learning timeframe. Also, remember that all learning settings across the school should be observed. For example, the observer collects data in the library if a class is in the library and in a reading specialists classroom if students are

with the reading specialist, and in a special education classroom if the special educations teacher has students in his/her separate classroom.

- **Distribute Data Collection Among Certified Collectors.** Assuming the school has multiple certified data collectors, the best plan is for one data collector to collect the data for one or two hours and then hand off the task to another data collector; the original collector returns to his/her students. That first data collector indicates to the second data collector where he/she stopped and the pattern being followed. The new data collector begins with the next classroom in the pattern and continues to collect data for one or two hours before handing off the task to the next certified data collector and returning to his/her classroom. This approach continues until the end of the school day.

- **Make a Mental Snapshot then Determine the Details.** The data collector takes a mental snapshot of classroom engagement as he/she enters the classroom. But that is only the beginning of the observation process. The data collector must then move into the room and among the students to obtain the necessary details to make an accurate data code. Details needed to code come from the data collector's observations of the students and their work, from interactions with students to better understand their levels of thinking, and from interaction with the teacher. The most accurate data collectors talk with the students more than half of their observations and they talk with the teacher more than one third of their observations. And, the best data collectors obtain insight from the teacher by using open-ended, non-judgmental questions such as "Please share with me what your students are working on."

- **Meet as a Faculty to Study the Data after Each Data Collection.** As with any learning experience, timely discussion and study of the data are important. Generally, a faculty should collaboratively study their data within a week after the data collection. The longer the interval, the more likely the faculty will find the study of the data irrelevant. Effective collaborative study sessions can generally occur in a 35 to 45 minute timeframe. The important issue is that the whole faculty participates, because the IPI Process is a school-wide data set—thus the whole faculty should study the data and discuss the related issues.

- **Meet as an IPI Team to Plan the Faculty Study Session.** Prior to leading the faculty in the study of the latest IPI data set, the IPI Team should meet to organize the session. This includes determining the desired outcomes of the session, establishing an agenda for the session, and distributing the leadership tasks for the activities of the session. While the principal may play a role in opening the session (setting the stage and showing support of the IPI work), the IPI Team should lead the faculty in the learning experiences for the session.

- **Engage the Faculty in Reflecting about the Data Collection Day.** Before actually studying the recently collected IPI data, the IPI Team should create two brief learning experiences so the faculty can reflect upon the "typicality" of the data collection day and of the lesson activities they used that day. This is particularly important to establish and maintain a minimal level of jazzed-up, atypical learning activities on the data collection day.

- **Engage the Faculty in Comparisons of the Data.** The IPI Team should organize the IPI data so the faculty can efficiently study and discuss the most recent data set and compare those data with prior data. This may necessitate longitudinal profiles and separate data charts as needed. The IPI Team should make every effort to place data charts in the hands of the faculty members, not merely project charts from a computer, so small group learning conversations can be the norm.

- **Create Collaborative Learning Experiences to Build New Knowledge.** Studying data during each faculty work session is important, but not adequate. For each session, the IPI Team members should lead the faculty in a 15-20 minute learning experience that expands the faculty's knowledge about best instructional practices and that fits the school's overall goals for cognitive engagement. The focus of these faculty activities should be on building knowledge and capacity to implement

more effective instruction—in other words, the new learning should have a high likelihood of being transferrable to classroom practice in the immediate future. Strategies for building new knowledge can come from the IPI Workshop materials, both from the Level I Workshops and the Level II Workshops. Also, learning materials can be found online through Google searches for the topic of focus. Another source of ideas can be found in high quality educational books such as John Hattie's *Visible Learning for Teachers* (2012), a must resource for all IPI Teams. Teachers implement new instructional ideas when they intellectually believe the idea has merit, and when they commit to trying it because it fits with their beliefs about what instruction should be. Increasing the intellectual knowledge is a critical step in moving toward changing instructional practices on a daily basis in the classroom. Three final thoughts about creating "new knowledge" collaborative learning activities: (1) This is the most important learning activity the IPI Team will lead during each of the faculty collaborative study work sessions; (2) the learning activity should support the school's annual IPI Goal.

- **Disaggregate Data per Faculty Requests.** By the end of the school's first full year of implementation of the IPI Process, the IPI Team should remind the faculty that the IPI Data can be disaggregated in various ways to provide more specific data for segments of the school. For example, math teachers in a middle school math department might request that the math classes be disaggregated from the school data for the next IPI school-wide data collection. In an elementary school, the second grade teachers might ask to see only second-grade engagement data so they can study their data by grade level. Or, perhaps the elementary teachers would like to compare their morning classes with their afternoon classes. In a high school the biology teachers might ask for disaggregation of the biology classes because they are implementing a new hands-on, laboratory based biology curriculum. To meet the requests, the IPI Team will simply earmark the data codes in a recognizable manner. For example, the data collectors might place an "M" in the margins next to each math class or a "2" in the margins next to a second grade class. Earmark only those observations that match the requests unless the whole faculty decides that they would like the IPI Team to earmark all data so it is readily available upon request from any segment of the faculty. Disaggregated data can be extremely valuable to segments of the school faculty. Three caveats are important when disaggregating data: (1) do not disaggregate the data unless the data are from three or more teachers because the data should not point back specifically to one or two individuals; (2) the IPI Team should inform the faculty of the possibility of disaggregation but should then await requests to disaggregate—do not collect data and earmark it for disaggregation unless the teachers request the disaggregation; and, (3) as is the case with the larger IPI dataset, no data should be marked in a manner that would point back to an individual and IPI data should not be used in any manner for personnel supervision or evaluation. Such use will promptly render the data useless if the faculty perceive the data are linked to personnel ratings and decisions.

- **Establish Annual Cognitive Engagement Goals.** At the end or beginning of each school year, the IPI Team should lead the faculty in the determination of one or two IPI Goals for the forthcoming school year. Such goals form the basis for the "new knowledge" learning activities the IPI Team will create for each faculty collaborative study of the data following a new data collection. In other words, the IPI Team will lead the faculty in short learning experiences to increase knowledge and ability to apply instructional strategies that will help the school accomplish their cognitive engagement goals.

- **Arrange the Setting for Collaborative Faculty Learning.** The IPI Team must be proactive in the arrangement of the environment used for the faculty collaborative study sessions. Working with the support of the principal, the IPI Team should create a work setting where the faculty can work in small groups to have their collaborative learning conversations and share out in a whole group to hear all views and "build collective learning" for the issues discussed. This usually means using a meeting location that will house the whole faculty in one room; however, sometimes it means moving from the larger room to individual classrooms for the learning experiences. The IPI Team should also develop strategies that will "mix" the faculty for the small group sessions and other

strategies when the faculty should be in "like-groups" for the learning experiences. In essence, the IPI Team must look upon their role as that of "teachers of the teachers" and arrange the setting for the greatest likelihood of quality learning just as they would if they were arranging their classroom setting. Remember, if an observer stepped into a faculty collaborative learning setting and gathered an IPI Category Code of the setting, most of the time that code would be a "5."

- **Understand Faculty Perspectives and Progress Accordingly.** The IPI Team must keep their "fingers on the pulse of the faculty" as they move the faculty forward toward the study of cognitive engagement. It takes an adept team of teachers and solid principal support to lead a faculty on a steady quest for higher levels of engagement and higher-order/deeper forms of thinking. For most schools, that quest will take several years of movement toward a balance of higher-order/deeper forms of learning and lower-order/surface forms of learning. Therefore, patience and perseverance as you build knowledge and creative collaborative learning experiences that can translate into changes in the classrooms of your school are necessary. Start slowly and move forward steadily. Grow the number of faculty who have deep understandings of the IPI Process and expand the nucleus of teachers committed to the study of engagement. Don't let the "nay-sayers" and "cynics" impede the school-wide path of change. The knowledge of what constitutes best educational practices continues to grow each year and a faculty must stay abreast of that knowledge curve, or fall behind the curve to the degree that the school's students pay a high academic price for faculty indifference or stubbornness. To be an educator in today's world is to understand and accept the continuous nature of change to which we must adapt. Understand faculty attitudes about change and stay the course.

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