

REFLECTING ON THE CRITICAL ROLE OF GENERATIVE STRUCTURES

THE EFFECTIVENESS OF THE NATIONAL WRITING PROJECT'S COLLEGE,
CAREER, AND COMMUNITY WRITERS PROGRAM (C3WP)

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INVERNESS
RESEARCH

DECEMBER 2017

This paper was prepared by Inverness Research with funds provided by the National Writing Project under a grant from the U.S. Department of Education. However, those contents do not necessarily represent the policy of the U.S. Department of Education, and you should not assume endorsement by the Federal Government.

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WHAT IS THIS PAPER AND WHY DID WE WRITE IT?

As students of and evaluators for the National Writing Project for over 30 years we at Inverness Research remain fascinated with the questions of why and how the NWP consistently creates indelibly potent professional development experiences for K-16 teachers of writing. We have learned to anticipate teachers' predictably high praises for the NWP. Even veteran teachers of many years who participate for the first time in the Writing Project say that their experiences were "transformational." Other long-term vets confide that because of their relationship with the NWP they were motivated to remain in and re-dedicate themselves to teaching careers after coming close to quitting.

During the course of our own association with the NWP we have reflected frequently on the key to the writing project's exceptionally successful professional development. One major hypothesis of ours involves the idea of *generative structure*, a core feature we have found over and over at the heart of NWP design. It is a concept that helps us understand the nature of the fundamental differences between a Writing Project experience, and the literally thousands of other professional development events and activities conceived and implemented by other educational improvement efforts we have observed over the decades of our work. The idea of generative structure is one that we at Inverness Research have employed internally, but have rarely shared with others, and have never formally portrayed to outside audiences.

Stimulated by our recent study of the NWP's College, Career, and Community Writers Program (C3WP), this paper is intended not only to illuminate the concept of generative structure, but also, by drawing on our ideas about the nature and role of generative structure, to share our views about the reasons for the program's success. The C3WP offers still another, additional example of how the NWP, applying its traditional norms and modes of work, created effective professional development experiences for teachers. It also demonstrates how by expanding its *métier* the NWP found new ways of designing generative structures, in this case aimed at the specific problem of teaching teachers and students in high needs rural settings an unfamiliar and challenging topic, argument writing.¹

¹ Since the launch of the C3WP in 2013, it has expanded to serving teachers not just in rural areas, but in a range of settings, including high needs urban locales.

² Generative structures help develop teacher learning, and, simultaneously, teacher leadership, which in

WHY IS THE NWP PROFESSIONAL DEVELOPMENT SO CONSISTENTLY SUCCESSFUL WITH TEACHERS? WHAT IS THE SECRET INGREDIENT?

Decades of study by university faculty focusing on the causal relationship between professional development, teacher instruction, and student achievement have accumulated a vast body of academic research readily available to both scholars and practitioners. Much of the research findings to date coalesce around a handful of specific attributes that have been found to contribute to the efficacy of professional development, e.g., content focus, sufficient time, in-school follow up, and others (Borko, 2004; Darling- Hammond, Wei, Andree, Richardson, & Orphanos, 2009; Penuel, Fishman, Yamaguchi, & Gallagher, 2007; Desimone and Garet, 2015). However, academics and practitioners who understand well what features are characteristic of effective professional development are still puzzled by the NWP. It is not self-evident why it has been as successful with teachers over many decades as it has been. It is more than simply what the NWP shares with other national professional development efforts—the NWP’s focus on content, on ample time, or, often, classroom presence. For example, at the 2017 AERA meeting in San Antonio, a series of papers on different facets of the C3WP were presented at a round table. Following the summaries, a participant in the discussion leaned forward to ask, “Can you please give more inside detail about the PD you offered teachers? I want to better understand what really made it work.”

What then IS the secret ingredient?

We posit the hypothesis that the NWP creates professional development by applying the design principle of generative structuring. Generative structures, in contrast to closed designs, are the way the NWP makes visible, palpable and experiential its core humanistic values—community, egalitarianism, and inquiry—thereby *generating* and ensuring teacher learning.²

WHAT IS THE CONCEPT OF A GENERATIVE STRUCTURE? WHAT IS THE GENESIS?

The genesis of our discovery of the idea of generative structure began in the early 1990’s when we at Inverness Research began a multi-year evaluation of the California Subject Matter Projects. The CSMPs are a statewide professional development network funded by state legislation (Senate Bill 612), and modeled on the Bay Area Writing Project (BAWP). The CSMPs consist of nine discipline-based projects, each with a state director and varying numbers of sites based almost always at the state’s universities. When we first launched our study we felt the need to become familiar with each of the projects. We conducted many site visits, focusing in particular on each of the project’s summer institutes. When we requested an observation at

² Generative structures help develop teacher learning, and, simultaneously, teacher leadership, which in our view go hand in hand in the National Writing Project. For a full discussion of this idea see our companion piece, “Teacher Leadership As The Scaling Of Teacher Learning” <http://inverness-research.org/2017/12/27/portfolio-c3wp/>.

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BAWP, then site director, Carol Tateishi, insisted that we attend one full week (not just one day) of the 5-week Invitational Summer Institute, a signature program of the NWP. She also insisted that we observe for the entire day, starting at 8:00 a.m. and finishing at 5:00 in the afternoon, making sure we experienced exactly what teacher participants did. In comparing and contrasting our observations of professional development activities at the end of this initial round of summer visits to the CSMPs, we, like others since, were struck by the difference in quality and qualities of the professional development we had experienced at BAWP. We saw teachers at BAWP participating at the fullest levels—talking with and questioning one another, reading, writing, never flagging in their energy or intellectual engagement.

When we stepped back to reflect on what accounted for the distinctiveness of the BAWP professional experience, we were puzzled. On the one hand, the activities—e.g., author’s chair, teacher demonstrations, research reading groups, etc.—were highly orchestrated, even ritualistic as in a Japanese tea ceremony or a Quaker meeting. But the effects were dynamic and far-ranging. It seemed paradoxical. Wouldn’t a rigorously constructed and implemented experience inhibit and limit participation and expression? And yet what we witnessed at BAWP—the vitality of full participation—was what one might expect from a wide open, freewheeling arrangement.

Glenda Gentry, the Director of The California Arts Project (TCAP) at the time, helped solve the puzzle. In explaining the mission of her own project and the nature of artistic endeavor, she described the role of constraints in the creative process. In the field of art, any kind of media—be it paint or charcoal or clay or even the size of a sheet of paper—provides the artist with parameters or structure that a wide open palate does not. The structure provides an impetus, a test that seems to generate creativity. In contrast, an “any-thing-any-way” approach actually seems to block creativity. Or as Miles Myers, an early pillar of the BAWP community and former Executive Director of NCTE frequently liked to say, “When things are too wide open all you have is existential nausea.” The creative challenge provided by constraining (but not too constraining!) structures appears to propel artists’ inventiveness, moving them along a pathway of artistic discovery. It was Glenda Gentry and TCAP, then, that helped us understand the counterintuitive dynamic between open and closed designs and between constraints and freedoms. We began to accept that what we termed *generative structure*—i.e., strategically well-balanced design structures, rather than inhibiting—actually promoted full and vibrant human response.

Over the years as we continued to observe NWP professional development and to think about the concept of generative structure, we also came to realize that NWP generative structures were closely linked to core humanistic values. Today we see generative structures as the deliberate design mechanisms through which the Writing Project realizes and shares its cultural values with participating teachers.

Although a handful of core values identified with the NWP exist, the three that appear to us to be most central are: community, egalitarianism, and inquiry. To clarify, we have learned that a driving principle behind every one of the local sites of the NWP is to offer teachers both a

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strong, welcoming professional home and *community* of learners and an invitation to co-create that community. Regarding *egalitarianism*, although well-intentioned, traditional professional development experiences are often structured around a deficit model³. Teachers may be thought of as lesser than, as lacking, as needing something professional development can supply. In contrast, the NWP presumes that teachers are respect-worthy because they bring with them knowledge and expertise developed through their teaching practice. In short, they are professionals with important contributions to offer. As for *inquiry*, “Permeating the entire NWP culture is the idea that constant questioning and searching are fundamental to good teaching,” write Lieberman and Wood (2003, p. 30), who identify as one of ten NWP social practices, “promoting a stance of inquiry” (cited in Heenan, 2009). Not surprisingly, the founder of the National Writing Project, Jim Gray, (2000) highlights the relationship between writing and inquiry. He cites, for example, a former Bay Area Writing Project (BAWP) fellow, who in developing a writing policy for his school, wrote, “Writing is a process of discovery, a mode of knowing” (p. 87). In a similar vein, he also quotes a site director who explained, “When we do our own writing, we are making learners of ourselves, in the fluid process of insight as it unfolds” (p.89).

As we continued our studies of the NWP we began to understand how generative designs derive from the NWP core values—community, egalitarianism and inquiry—and how, concurrently, generative designs stimulate and realize those values in real time. It becomes possible in this way, to open up “the black box” of NWP professional development, to see the internal architecture of generative structuring, and to appreciate how the Writing Project achieves its repercussive successes with teachers.

WHAT IS AN EXAMPLE OF A TRADITIONAL NWP GENERATIVE STRUCTURE THAT MIGHT HELP ILLUMINATE THE CONCEPT?

One of the major iconic activities that occurred in the NWP Invitational Summer Institutes we first observed in the 1990’s⁴, and perhaps the best illustration of traditional NWP generative structuring is the teacher demonstration. Serving as the backbone of the institutes, demonstrations typically last 90 minutes. Each participant selects some aspect of her teaching practice to bring to the whole group. But teachers are not left on their own. Summer Institute participants across NWP sites engage in advance in some kind of process designed to prepare

³ In their book, *Inside the National Writing Project*, Lieberman and Wood (2003) describe a set of ten “social practices leading to professional community” that describes the NWP. Although we have come to believe that these “social practices” are derivatives of more foundational core values, we owe a great debt to Lieberman and Wood’s description of social practices. Their thinking helped us understand better the nature and role of NWP core values, and how they are realized throughout the NWP network.

⁴ The “classic model” of the NWP ISI, on which our first discoveries about the concept of generative structures developed, and on which this discussion is based, has in fact evolved over the past 30 years. NWP professional development now varies across sites in order to meet new needs and take advantage of new thinking, but the fundamental principles, many of which we discuss here, remain.

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then for their demonstration. Supported by site teacher leaders who serve as guides or facilitators to the summer institute, the “coaching” process is generous, often occurring over several sessions, lasting multiple hours overall. Coaching helps participants include key elements in their demo the NWP has identified as critical. These are: making sure the topic and purpose of the demonstration are clear; describing the teaching context; explaining the goals and intended results of the lesson for students; including a hands-on activity (reading or writing) to give other institute teachers an opportunity to experience aspects of the demo lesson for themselves; and finally, allowing plenty of time for reflection, questions and discussion among all group members.

Elements of the teacher demonstration—such as the requirement itself, the specific time limit, the suggested format included in the coaching processes, as well as the guidelines for the large group reflection and responses following each teacher demonstration—are formalized and consistent. They serve as a well-defined, commonly accepted “structure.” But how then is the teacher demonstration generative, and how are the core values realized? To help us clarify our thinking we spoke briefly with a former BAWP site director, reviewed our own observations of BAWP events, and more broadly reexamined a large bank of material we have produced while studying the NWP over the last nearly thirty years.

Focusing first on the core value of *egalitarianism*, the fundamental premise of the teacher demonstration rests on the belief that teachers have knowledge, experience and authority. Experts are not held up to tell teachers what they don’t know and should do. Rather, teachers are expected and required (not merely invited) to share what they know with other teachers. When an individual teacher is asked to bring her teaching to the group, she and she alone selects the topic. There are no requirements in the summer institutes to focus on a pre-decided subject such as, say, the standards or the 9th grade ELA curriculum. Instead, the teacher chooses what to demonstrate because it is important to her and her students, and is supported in digging into and shaping her message. As she delves into her topic, she develops her expertise and engages in the expertise of others. In this way the summer institute program consists of teachers teaching teachers. While the teacher demonstrations unfold over the course of the institute, participants witness first hand how accomplished, creative and thoughtful they and their colleagues can be.

In regard to the value of *community*, the demonstrations occur within a community of teachers, and at the same time build that community. Demonstrations are deliberately presented to teachers in a group, through talk, interaction and reflection. They are not delivered in small groups or one on one, or through writing or video. Rather, in real face-to-face time, institute teachers individually dig deeply into their own teaching to make it visible, while also collectively interacting with each demonstration as it unfolds. Over the 3 to 5 weeks of the summer institute, a learning community forms.

Finally, the NWP core value of *inquiry* is also realized through the teacher demonstration. Every demonstration serves as a kind of intellectual journey. Each teacher—internally and independently, and again externally with “thinking partners” through the support of the

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coaching process—is asked to think about the essentials of the demonstration lesson. Still again in the large group context, the lesson is held up for a 90-minute examination and reflection. In this way the structure of the demonstrations demands inquiry and reflection, both from the individual and from the group.

The teaching demonstration, as a prime example of a NWP generative structure, illustrates both its derivation from the core cultural values, and its simultaneous reification of those same values. As teacher demonstrations unfold a culture builds. A former BAWP site director explained what happens in a summer institute through the steady accumulation of the teacher demonstrations:

When you have this enormous respect for each individual and this enormous collective respect for what teachers can do and for what they know, I think teachers become more open. They become more starved to know more. They stay in touch with each other...because this is where they can learn so much. I think people go into teaching because they do love learning. So, I think that atmosphere of respect around those presentations really makes a cultural shift.

WHAT IS THE C3WP?

With the opportunity to study a new NWP project, the College, Career, and Community Program (C3WP), we witnessed how the NWP continued and evolved the concept of generative structure decades later applying it yet again to meet more current, but ever challenging professional development demands. In late 2012 the NWP won a federal Investing in Innovation (i3) validation grant, enabling it to launch the C3WP,⁵ in the winter of 2013. Twelve local NWP sites participated over a two-year period. They served 22 high poverty rural districts in 10 states: Alabama, Arizona, Arkansas, Louisiana, Mississippi, Missouri, New York, Oklahoma, South Carolina, and Tennessee. The program was designed to improve teachers' ability to enhance and increase students' skill in writing arguments based on nonfiction sources—a skill central to college and career readiness as well as to preparation for informed civic engagement.

An independent intent-to-treat randomized control evaluation of the program conducted by SRI found the C3WP to be effective in supporting teachers in changing their practices and in significantly improving students' skills in argument writing. Treatment teachers reported spending significantly more time than control teachers on argument writing (41% versus 13% of instructional days) and placed a significant or heavy emphasis on crucial skills for source-based argument writing during that instruction. In turn, students in C3WP districts significantly outperformed students attending control districts on four attributes of student writing.

Following this successful trial, the National Writing Project used subsequent federal SEED and i3 scale-up grants to expand the program. After five years and work with hundreds of teachers,

⁵ Originally called the College-Ready Writers Program.

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the C3WP's approach evolved to include three interconnected parts: intensive professional development, collaborative formative assessment tools, and instructional resources.⁶ As of 2017-18, the NWP has scaled up C3WP teacher leadership development and in-service programs in high needs schools to 96 NWP sites in 44 states.⁷

HOW DID THE C3WP ACHIEVE EFFICACY EVEN IN THE MOST CHALLENGING CONTEXTS?

In the end the C3WP was able to successfully enhance the teaching and learning of argument writing in the target districts.⁸ But its achievement was not immediately assured. In fact, the story of how the NWP learned and adapted itself to the hurdles posed by the high poverty, low achieving rural contexts of its target districts illuminates, in our view, the abiding efficacy of the Writing Project's generative structure design strategy.

At the launch of the C3WP in early 2013 the central premise of the theory of action⁹ was that teacher leaders at each of the participating sites would design and facilitate professional development focused on the Common Core State Standards (CCSS), in particular evidence based argument writing. Implicit in the theory was that these teacher leaders would support the participating classroom teachers at their sites through a range of professional experiences—e.g., workshops, coaching—adjusting their work according to the needs of each idiosyncratic local context.

The theory of action assumed the capacity of local teacher leaders, which, however, turned out to be lower than anticipated with respect to the particulars of source-based argument writing. According to formative evaluation, including site visits and interviews conducted by NWP leaders as well as research teams from SRI and Inverness Research, it soon became apparent that for many years in most of the C3WP schools very little writing had been taught. Instead, reading and literature had been the focus. It also appeared that very few local NWP site teacher leaders had taught source-based argument writing or were familiar with how to do it. Overall, site leadership's knowledge about and experience with argument writing was limited. Even though sites mustered professional development efforts focusing on the CCSS and the nature of argument writing, "the project as a whole had not developed a shared approach to teaching argument and site's knowledge bases were uneven" (Friedrich, 2017, p.3).

⁶ We acknowledge the importance of the interconnectivity of these three program elements to the overall efficacy of the C3WP; however the focus of our particular interest in this paper is on the instructional resources component as a prime illustration of the concept of generative structure.

⁷ For a fuller description of the C3WP program design, see our companion paper, "Serving Colleagues and Community Professionals," pp. 3-5. <http://inverness-research.org/2017/12/27/portfolio-c3wp/>

⁸ For teachers' perspectives on changes in their practice, see our companion paper, "Deep Changes in Classroom Practice." <http://inverness-research.org/2017/12/27/portfolio-c3wp/>

⁹ This account of the theory of action and its evolution summarizes from Friedrich (2017).

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Under pressure to get argument writing central to C3WP professional development and to get its teaching and learning much more fully realized in classrooms, the leadership team began to develop important new components to the program, namely common instructional resources and formative assessment tools.¹⁰ These tools, coupled with professional development opportunities for teachers, helped bridge the gap between the lofty, unrealized goals of argument writing envisioned in the CCSS and actual classroom instruction. In spite of some early criticism of what seemed to a number of site leaders a too-prescriptive approach uncharacteristic of the NWP, the tools gave classroom teachers a concrete place to start by providing high-quality, accessible and ready to use ways of teaching argument writing. Moreover, as teachers at the sites used and studied the materials together, bringing with them the resulting student work to examine, discuss, and inform next instructional moves, the instructional resources became increasingly acceptable.

Although the NWP's typical approach of relying on local site leadership capacity did not initially hold up to the quick turnaround demands of the C3WP, we see traditional NWP practices playing a key role in the ensuing development of the C3WP instructional resources. The curricular and formative assessment tool development process served as an accelerated individual and community inquiry. Teachers from all levels ranging from the national leadership team to local site teacher leaders and classroom teachers shared responsibility for designing, testing and implementing the tools. Moreover, as the content developed so did design guidelines or "principles" that were widely shared throughout the C3WP network. Currently these exist as "C3WP Instructional Resources Design Principles" on the C3WP website.¹¹

In our view, then, the C3WP realized success because, first, it was able to draw on NWP network capacity to fast track the development of tools teachers needed to make the teaching and learning of argument writing viable in their classrooms.¹² They were developed by teachers for teachers through an iterative process that drew on the C3WP community input at large. Second, success was assured because the instructional resources did not violate NWP cultural tenets. The resources, in particular the curricular tools, were not canned or prescriptive, nor delivered in a top down manner. The instructional resources assumed that students had something to say and to offer, and that professional development providers as well as teachers would make wise professional decisions about using them flexibly in a range of school and district contexts.

¹⁰ In the first iteration of the program, the College-Ready Writers Program, the curricular tools were called mini-units, each created around a particular argument topic, text set, and writing skill. The formative assessment tool remains known as the Using Sources Tool.

¹¹ <https://sites.google.com/site/nwpcollegereadywritersprogram/home>

¹² For a full explication of the importance of the NWP network capacity to the success of the C3WP see our companion paper, "The Role of Educational Improvement Capital In The Success Of The National Writing Project's College, Career, And Community Writers Program." <http://inverness-research.org/2017/12/27/portfolio-c3wp/>

HOW DO THE C3WP INSTRUCTIONAL RESOURCES FUNCTION AS GENERATIVE STRUCTURES TO PROMOTE STUDENT AND TEACHER LEARNING?

I have been thinking a lot about agency lately...the idea of how important it is for teachers to have professional agency, to make choices about the classroom and about curriculum. I think if we want our teachers to make these choices, we need them to have good resources and good materials. And we want them to be able to share and to feel like... 'This thing that I am making and that I am doing—it is useful not just for myself or for my students, but for other key people too.' I think when you can see something that you have done, accomplished, and spread—it can be very powerful. Do you know what I mean?

—*Classroom teacher*

The C3WP instructional resources, available to teachers on the C3WP website, are teaching materials that provide information to students about multiple facets of a controversial issue.¹³ They scaffold both students' engagement with those texts and the formation of student's own evidence-based arguments about the issue.

Created by C3WP teachers for teachers, they serve as an argument-writing curriculum in which, in our view, the principles of generative structure are applied in order to promote deep learning for both students and teachers. Generative structures are deliberately designed to strike a balance between providing direction and guidance through constraints, while simultaneously providing engagement through space and openness, and thereby eliciting important learning for those interacting with those structures.

Like the iconic NWP teacher demonstration we discussed earlier in order to illuminate the idea of generative structure as well as to amplify the following analysis, the instructional resources incorporate and manifest core NWP values. As the teaching demonstration realizes the values of egalitarianism, community and inquiry through the processes of a teacher's selection, planning and delivery, so are those same values realized as classroom teachers use, evaluate and adapt the argument writing resources with students in their classrooms.

We see three major dimensions in which the C3WP instructional resources reflect generative structure design, thereby enabling teacher to experience firsthand NWP core values.

¹³ See <https://sites.google.com/site/nwpcollegereadywritersprogram/instructional-resources/crwp-mini-units>

The concept of C3WP instructional resources

The concept of instructional resources is very different from what teachers often encounter in their schools and districts, i.e., a textbook or syllabus or course of study they are expected to follow, even, in some cases “accountable” for teaching on a schedule, day by day and page by page. The C3WP materials are a resource, not a package nor a prescribed sequence. They do not dictate to teachers what and when to teach, but rather invite teachers to explore, select and assemble argument writing lessons according to their own level of knowledge and the skill level of their students. The curricular resources provide an “arc” of possible instructional development, but ultimately teachers are trusted to serve as the instructional decision makers in their classrooms.

A teacher leader who has been deeply involved in both piloting and developing C3WP argument writing materials since the inception of the project explains the concept of instructional resources.

We have done away with the term mini-units...now we talk about curricular resources. When we say curricular resources, that refers to materials that would be used to teach a specific lesson to students about argument. Some of those are longer than others and the new C3WP website is organized to delineate between them. There is a category called Entering the Conversation with two curricular resources underneath it. Other categories are: Using Source Material Purposefully, Advancing Arguments with Evidence, Applying Argument Skills, and Researching Self-Selected Topics. Finally, there’s a list of supplementary materials at the end. So this [re-configuration] really helps us form a more cohesive group of materials that support each other, for specific reasons and gets us away from just topics of argument. It helps us reframe the conversation in a way that can help teachers understand the shifts that need to be made in order to help students improve their performance.

Another teacher representing many we interviewed explained her experience using the C3WP instructional resources:

I’m not locked down...I can change the materials based on where my students need the extra help, the extra practice... It doesn’t feel like a script to me. I can make my changes and adjust, and mold [the materials] to what I needed them to be and I didn’t feel like I was breaking anything by doing that. It still worked; I just had to adjust them for what my students needed.

In this way, then, the concept of instructional resources is an open, generative design. In contrast, a syllabus or course of study to which teachers are expected to use is more closed. A bank of resources demands teacher engagement with the materials and teacher choice about what materials to use and why. In this way conceptualizing the argument writing curriculum as instructional resources shows that teacher knowledge, experience and expertise is to be trusted and respected. As with the teacher demonstration, the idea of “resources” requires

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teacher agency and authority, demonstrating how the NWP core principle of egalitarianism once again undergirds the design concept.

The pedagogy of teaching argument writing embedded in the C3WP instructional materials

A teacher leader who provides professional development for the C3WP and who uses the instructional resources in her own classroom describes their effect on students:

The C3WP resources are a collection of instructional materials and strategies that foster growth and critical thinking and communication skills while fostering an interest in self-directed learning in students. They build one on another to prepare students to be successful, not just in post-secondary education, but in life. It teaches them the skills to critically engage in the world that they are living in...so they lead students through the learning process in a way that is innovative and creative because there aren't, say, worksheets...they teach students how to generate their own idea, and to think and interact and converse with text in a way that they have never been allowed to before.

This teacher highlights the contrast between two different modes of learning. A worksheet is too structured and therefore constrains her students' creativity, compared to the C3WP resources which incite student thinking. Our view is that the kind of "learning process" this teacher describes as "innovative and creative" occurs for students, because of the underlying generative, not restrictive, pedagogical features and practices the C3WP materials model and enable a teacher to use. We describe four of these major pedagogical features in the following.

First, the resources focus pedagogy on the teaching of the skills of argument writing. Although when first conceived and made available, the resources (then known as "mini-units") centered on topics or issues, they later evolved into a more open design, organized on the website by skill. The idea is for teachers to continually ask students to build, practice and grow the complex array of skills necessary for effective argument writing. A teacher leader explained, "They teach teachers the idea that you come back to a skill across time." The topics are current and provoking, but they are not the *raison d'être* of argument writing instruction. The distinction between skill as an open process, and topic as a closed entity is therefore important, showing again the design principle of generative structuring and revealing to student and teacher alike that writing is a process, "a process of discovery," or a kind of inquiry as Jim Gray described.

In a similar way the C3WP instructional resources also distinguish between the pedagogy of teaching for mastery and the teaching for recursive development of writing skills. A mastery checklist for each student is familiar to most teachers. Mastery implies a completion, or an end to a process. Recursive activity, in contrast, implies on-going, process-oriented activity reflecting a generative design. "The purpose (of the C3WP materials) is to continually build and strengthen student argument in whatever way (the teacher) needs to think about it."

Another feature of the pedagogical principles around which the C3WP materials are designed is the distinction between "pro and con" perspectives, which are closed, and multiple

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perspectives, which are open. The nature of the text sets presented in the C3WP resources offer students and teachers many, varying perspectives, not just two opposing views. The aim of this pedagogy embedded in the instructional resources is, as the following teacher leader explains, purposeful:

To force...exploring multiple perspectives on and angles on an issue, especially at the beginning because it's likely that people wouldn't even know there are multiple issues, but to instead recognize that people have lots of different things to say in the world about various topics. ...The idea is for teachers to ask students in a pretty repetitive way to notice that there are multiple stances. The resources don't present a pro-con... Instead there is a layering of these resources, to deliberately move away from pro-con.

The focus on teaching multiple, not merely opposing perspectives, is a deliberate generative design embedded in the instructional resources that taps the NWP core value of inquiry. Taking one of two sides in an argument, either pro or con, does not generate the probing, questioning and talking that a focus on inquiry through developing multiple perspectives on an issue does.

Finally, the pedagogical feature one teacher leader called “Teach Small” is set into the C3WP instructional resources. The materials are skills focused, designed to give teachers accessible, palatable chunks of instruction they can choose to teach students the skills necessary for argument writing. In our view, the “Teach Small” pedagogy assumes the principle of egalitarianism—namely, that students are intelligent and capable of learning argument writing, and that teachers too are able to deliver argument writing instruction from which their students will benefit. As a teacher explained to us:

Instead of assigning an argument or instead of telling students, ‘Develop your sources,’ the C3WP resources enable teachers to teach students a way to do it...for example, there are materials for showing students ‘This is how you develop a claim, or this is the kind of language to use, or this is how you judge reliable quality sources...’ If you tell students to produce one big single product once a year, say an argument essay...they can't do it.

It is this feature—Teach Small—that enabled the classroom teachers we interviewed over the years to report that before the C3WP they assigned writing, and afterwards they taught writing,¹⁴ thereby providing proof positive of their students’ worth and ability.

A way into a community of inquiry

Traditionally the NWP introduces teachers to professional reflection and inquiry through questions of practice an individual teacher might bring to the table. In contrast, and initially to the concern of some, the C3WP effort began teacher inquiry differently, by first asking teachers

¹⁴ See our companion document, “Deep Changes in Classroom Practice,” (<http://inverness-research.org/2017/12/27/portfolio-c3wp/>) for a full explication of teachers’ perspectives about what they learned and how.

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to use the argument writing materials the program developed, trying them in their classrooms, and then coming together to discuss and reflect on what their students learned.

One of the teacher developers with whom we spoke elaborated this strategy the C3WP employed:

There are multiple ways into (community and inquiry)...one way is to try something in our classrooms so we can all talk about it...there is benefit in all trying something together and having that common experience to start the conversation...it's giving teachers enough structure to get something done that is different in their classroom, but also enough space to do something on their own.

This adaptation worked. In spite of fears that the argument writing curricular resources might be too prescriptive and therefore too closed in design, the C3WP did in fact generate a sense of community of inquiry among teachers.

It evolved first of all, because teachers did not feel uncomfortable using the materials. As one said, "The materials were not so scripted that you felt constrained, but they were scripted enough that you feel supported." In this sense, community of inquiry developed through usage. Teachers interacted with the resources individually of course, by using the materials in their classrooms, but also together, by learning and sharing about their instruction, thereby generating and deepening community inquiry-based learning. This kind of inquiry in community was deliberately engineered in various ways. For example, the C3WP website invites teachers' ongoing comments and questions; teachers come together at C3WP local or national professional development events; and various national and site level opportunities for on-line interactions via webcasts, hangouts, etc., occur.

Second, the creation of the instructional resources involved large numbers of C3WP teachers over several years of iterative development. The materials were not written and delivered by a single person, but rather by a group of teacher leaders who, in turn, sought out others to participate in the process. These additional participants in the development process were involved in testing, critiquing, refining and expanding the materials. The group at large, by using, adapting, improving and continuing to grow the materials matured into a community of inquiry revolving on the C3WP.

One novice teacher captured well how and why the C3WP resources served both to support her teaching of argument writing, and to support her participation in a professional learning community.

Knowing that this bank of materials is consistently solid...well constructed and thoughtfully put together...that is really reassuring for me, knowing that what I find there has been used, and that other teachers have had success with it. I am thinking about C3WP as a community of like-minded people who teach writing and who write. I think the fact that we have these resources is really important. They are not super

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polished, and I kind of like that because you can tell that a real human made this for a real class. And it wasn't something produced by like a textbook company to be published in a book to have money made off of it, but it was like a real teacher who made it from their real class and used it and they went back and changed it and is sharing it. And then someone else picked it up and so, I think in that sense, the fact that these are just teaching writing and are being considered expert enough to share this material with other teachers that need it—well, it's like open source and I think it is really important just for us as a community.

WHAT KIND OF LEARNING DID THE C3WP CURRICULAR RESOURCES GENERATE? IN WHAT WAYS WERE THEY EDUCATIVE?

In order to rise to the challenge the C3WP effort posed, the NWP used the idea of generative structures in new ways, applying the familiar design principle for the first time to the development of curricular resources that could be readily used for teaching and learning argument writing. After talking with C3WP teachers, teacher leaders and project leaders for the past couple of years,¹⁵ we are confident that the NWP effected learning through reliance on developing its change strategies using generative structures. Teachers' reports converged on the following major ways the C3WP was educative.

Teachers learned how to teach argument writing in their classrooms

Quite simply, the C3WP instructional resources succeeded in fulfilling their stated goal, empowering teachers to teach argument writing to their students. The curricular resources provided concrete materials for a way into argument writing, a place for teachers to begin something new and unfamiliar. They served as an easily accessible, ready to use bank of materials that teachers could draw on to teach argument skills in their classrooms. One teacher explained why she thought of the C3WP curricular materials as her “go-to” for argument writing: “The instruction and the reading and the scaffolding are all included in each unit.” She continued, “My students get great assignments and rigorous lesson plans, and I didn't have to write them. It's a win-win for everyone.”

Teachers learned about the nature of argument writing

Teachers we interviewed often reported that before their participation in the C3WP they did not really understand argument writing. They were not sure what it was, and they had little or no experience teaching it. One especially frank teacher said, “The state standards were out before I got involved with the C3WP, so I knew I had to teach argument writing. But, I really didn't know...a student might ask me, ‘What's the difference between a persuasive essay and an argument essay?’ I could never answer that.”

¹⁵ Our data sources are listed in the end note.

However, by using the C3WP curricular resources, teachers learned about the complexity of argument writing.¹⁶ They learned to teach specific key elements of argument writing to their students. The same teacher quoted above, representing many others we interviewed, went on to say:

Honestly, my whole practice of argumentative writing has changed because of the C3WP resources. For me now, the key idea is the...dissection of a skill. When you look at all of the skills that are necessary to write an effective argument, you realize that if you don't chunk those out into pieces, like these curricular materials have done for us teachers, you are going to miss some. The materials help ensure that I teach my students things like linking evidence to claims, ranking evidence, that I teach them that whole set of skills ...there is so much learning for teachers and students to get out of these little units.

Students learned argument writing

As teachers brought argument writing into their classrooms and began to teach using the C3WP instructional resources, students responded positively. They learned how to write argument. Too often in the past, we were told, teachers had asked students to write an argument paper but had failed to provide the scaffolding to show students how. The C3WP curricular resources teachers used, however, provided the incremental progression students needed.

[The units] have broken apart the skill into manageable pieces, so when the student tries to tackle argument writing in this kind of step by step, very well sequenced unit, they do [succeed], and they really gain confidence. I have seen it time and time again.

Teachers said the level of student participation in the C3WP instructional units was exceptionally high. Students did not remain passive recipients, but rather it was they who did the work, and who became absorbed in the topics and processes of developing a piece of argument writing. The following teacher leader explained:

My experience teaching the (C3WP) units is that the students are engaged in a way that I haven't really ever experienced before. The conversation that happens between students is really rich and exciting, because what happens with the materials and the topics is that kids are so engaged that they go out and do research on their own, which is amazing. They come to me, 'Hey, Ms. T., you will never believe what I found!' They share articles with me or a song that they think connects to what we are studying. So that kind of engagement, not just in the materials but in the world, it is huge. I see the argument

¹⁶ Jerome Bruner (1977) argued for curriculum's educative purpose for teachers: "A curriculum is more for teachers than it is for pupils. If it cannot change, move, perturb, inform teachers, it will have no effect on those whom they teach. It must be first and foremost a curriculum for teachers. If it has any effect on pupils, it will have it by virtue of having had an effect on teachers." For more resources on educative curriculum, see Ball & Cohen (1996) and Davis & Krajcik (2005).

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writing resources moving students from being passive learners in my classroom to engaged citizens in the world...where they are talking about and hearing about and arguing, civilly with each other about stuff that matters to them...it is transformative in the classroom.

Teachers learned about their students and their potential

Teachers said that their students' specific argument writing skills improved as they experienced C3WP instruction, but also their more general abilities improved, e.g., independent learning, involvement, discourse, etc. As teachers witnessed their students' growing grasp of argument writing, and full participation in intellectually demanding work, their views of the potential of their students expanded. By experiencing their students in surprisingly different ways, teachers' expectations of their students grew.

One of the teacher developers of the C3WP instructional resources discussed the effect of students' embrace of and success with argument writing on teachers.

I think it affects other aspects of teaching...I think teachers start to look at students differently...it is eye-opening when you start to see students engaging in sophisticated, adult conversations...That [thoughtfulness] is educative for the teacher in a way that I think continues into all other aspects of their teaching life.

Through such positive feedback cycles, teachers and students alike began to learn to expand the possibilities of what could happen in class, and to raise the ceiling on the kind of learning that could occur there. In many instances they created a classroom "culture of argument."

Teachers learned more broadly about the teaching of writing

Not only did teachers using the C3WP instructional resources learn how to teach argument writing, they also took home important lessons about teaching writing in general. At the most fundamental level teachers using C3WP materials in their classroom learned the difference between assigning writing and teaching writing.

C3WP instructional resources showed teachers how to think about the elements (skills) necessary for students to achieve a written piece. They also showed teachers how those elements could be taught or scaffolded in bite-sized, digestible chunks. And the C3WP illustrated the recursive nature of teaching and the value of practicing writing in a kind of spiral of ever growing effectiveness. Through committed and robust teaching of argument writing using the C3WP materials, many teachers also came to realize the importance of creating a classroom culture conducive to thinking and writing. The implication of all of these aspects of C3WP curricula was that they were transferable. Teachers could apply those pedagogical ideas to the teaching not just of argument writing, but to the teaching of writing in general.

Teachers learned about benefits of participating in a learning community

Through using the C3WP curricular resources, and in so doing building a “culture of argument” in their classrooms, teachers experienced firsthand the positive influences learning in a group format had on students. Their students’ ideas were tested, expanded and enhanced as they participated in activities that demanded conversation and discourse with their peers. Some teachers felt that the multitude of student voices promoted by the public nature of the argument writing lessons helped shape and strengthen what their students learned.

Paralleling their own students’ experience in the classroom, many of the teachers with whom we spoke cited the benefit of their own learning about argument writing shoulder to shoulder with other teachers. The learning communities they described were multi-faceted—perhaps appearing within the curricular resources as samples of teacher work, or existing as on-line discussions, or consisting of face-to-face professional development events. The following novice teacher leader described how these sorts of interactions with other teachers helped her learn, to grow, and to refine her teaching of argument writing.

Some of [the curricular units] have teacher work that has been embedded in them. They are there as aids from the original teachers who developed the mini-units, so I have used somebody else’s PowerPoint or at least ideas from that PowerPoint. Also, there has been a huge and very exciting conversation on Google Plus, a kind of Google Plus community about rubric development. We’ve asked ourselves, ‘How do you assess these skills? And how did you assess when even by day 3, let’s say, my kids still don’t seem to be getting this concept?’ The feedback! That is the beauty of piloting these materials as I did. The Google Plus community that we used for the C3WP was unbelievable—I could get answers from one class to the next to help solve any kind of issue that I had. So that piece of it was really educative for me too... I can learn. I am learning all of these things from all of these teachers...

IN CONCLUSION

We were initially apprehensive when the C3WP focused its efforts on the development of instructional resources for teaching argument. We understood well the dilemma the project faced. What could be done to bridge the wide gap between the demand for argument writing posed by both the CCSS and the requirements of the i3 investment, and teachers’ capacity to deliver good instruction to their students? The challenges were great, especially in the rural, high needs districts the project first served. Many teachers lacked familiarity and experience with teaching writing of any sort, much less complex argument writing.¹⁷ Even when the C3WP provided professional development, the project still faced the quandary of how best to support

¹⁷ See our companion paper, “Serving Colleagues and Making Connections” (<http://inverness-research.org/2017/12/27/portfolio-c3wp/>) for the rural teachers’ perspectives on their teaching contexts.

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teachers in actually taking their professional experiences and translating them into concrete argument writing instruction in their classrooms.

We doubted whether the effort to create the argument writing materials teachers needed would escape the rigidity we had come to associate with a prescribed curriculum. It seemed to us a contradiction in terms to think of a “C3WP curriculum.” However, in the end our doubts were assuaged as the C3WP community embarked on a course of resource development. In response to novel and especially challenging circumstances—to provide teachers with high quality but ready-to-use tools for argument writing—the C3WP’s natural recourse was to fall back on and to apply tried and true principles.

The instructional resources were created in ways that we recognized as typical and emblematic of the NWP. At the heart was the design principle perennially used by the NWP to reify its core cultural values—the generative structure. As teachers we interviewed attested, the C3WP materials provided the “guided freedom” characteristic of successful generative structure. Simultaneously, as teachers used the materials, they also served to show teachers, who often had limited professional experiences, the NWP philosophy of teaching and the NWP stance toward teachers. In other words, the generative structuring of the instructional resources helped realize the values and norms central to the NWP. Through their usage teachers experienced being treated as equals, trusted to make sound instructional choices. They experienced the benefits of working together in community, invited to co-evolve the C3WP materials and improve their teaching, and they experienced becoming inquirers, encouraged to become ever better and more reflective practitioners through asking themselves and others questions.

A teacher leader who helped develop and try out C3WP argument writing resources in his rural classroom illuminates how the program envisioned creating a novel approach and context:

Just in the same way I wouldn't want my students to write a formulaic argument piece, I wouldn't want a teacher to teach C3WP in a formulaic way. I would want them to adapt and react to the real breathing, thinking students that are sitting in their classrooms. ...I think there is a 'third space'...rather than a very strict, rigid program, or an open program with no parameters and no guidance, there is this 'third space' where we can guide folks with tools and resources and key understandings...then respect them as professionals to use what they learned...to make informed decisions about who their students are and what their students need and what to teach next.

The instructional resources for argument writing available to teachers on the C3WP website rest on the authority of teachers, assuming an egalitarian stance toward them. They demand that teachers themselves, no one else, investigate, select, assemble and adapt the materials. As teachers both individually and in groups reflect on their usage of the resources, inquiry becomes central to the continued expansion and refinement not only of the resources, but also of the community of teacher developers. And as classroom teaching and assessing using the

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instructional resources continues, communities of learning emerge throughout the C3WP network.

In summary, we see that the NWP's College, Career, And Community Program achieved its goals: to support the teaching of argument writing in rural schools and districts without forsaking NWP traditional values or its time-honored, well-established approaches to accomplishing work. In fact, the C3WP effort demonstrates how these core values and well-proved strategies—by applying the design principle of generative structure—were successfully extended to new, especially demanding challenges.

END NOTE: DATA SOURCES

The data supporting this paper are drawn from five major sources:

- 1) We conducted in-person and phone interviews with a range of teachers throughout the first two years of the C3WP, from 2013-2015.
- 2) We conducted additional interviews in the spring of 2016 with 18 still actively participating teachers selected by NWP site directors or C3WP coordinators. This sample of teachers can be considered “best case.”
- 3) We conducted 147 classroom observations in C3WP classrooms in the first two years of the project, from 2013-2015. These observations provided important backdrop information to the teacher interviews, giving teachers' testimonials both credence and color.
- 4) We also conducted roughly 48 observations of various professional development events, ranging from all-day workshops, to one-on-one coaching sessions. These were primarily conducted in the first years of the project, from 2013-2015. Familiarity with the various professional development experiences teachers enabled us to understand better when teachers cited particular tools, resources, or interactions they found useful.
- 5) Most recently, in the fall of 2017, we conducted 11 lengthy phone interviews with C3WP teacher leaders, many of whom contributed extensively to the development of the C3WP instructional resources.

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