The Application of Educators' Knowledge, Skills and Dispositions to Impact Student Learning:

A Case Study of an Educator Preparation Program

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# Introduction

Instructional decision making is key to the happenings of classrooms. Whether this occurs in planning for instruction or in actual classroom teaching (i.e., “interactive” teaching), educators are constantly required to make decisions that impact instruction and the instructional choices they make. It has been found that educators make on average 1,500 decisions each day during interactive teaching alone. These decisions require immediacy and spontaneity (Cuban, 2011). Since they are often unplanned and made in response to learners in situ, it is not always easy to clearly articulate and/or define the impact of these decisions on the learning and development of students. And yet, we know that educators’ impact on student learning is guided and determined by the decisions that they are making within the classroom. As such, these decisions must be effective to be impactful. To be effective, decisions must be based on knowledge of students, knowledge of the content being taught, and a vision of where students should/might be following instruction (Doyle, 2003).

The purpose of this study is to determine the impact of completers from an educator preparation program on the learning and development of P-12 students within their classrooms. It is based on research which suggests that educators use multiple forms of data in conjunction with reflection and self-evaluation to make instructional decisions that positively impact the learning within their classrooms. Questions that guide this study are:

1. In what ways, if any, do completers of an educator preparation program impact the learning of the students in their classrooms?
2. In what ways, if any, do completers of an educator preparation program apply the professional knowledge, skills, and dispositions they learned in their preparation program?

## Literature Review

### Instructional decision making

Improving the learning of all students within a classroom requires educators to be keen instructional decision makers. Instructional decision making requires educators to identify what it is they want each student to learn *and* how they will know when that learning has occurred. The systematic process of using data to guide the instruction that occurs within classrooms necessitates that educators understand and know their students, the content and concepts they are teaching, and the pedagogy maneuvers that will best meet the needs of learners. Instructional decision making is the embodiment of Shulman’s (1986) Pedagogical Content Knowledge (PCK).

Studies have found that educators’ PCK has greater predictive power for student progress and instructional power than content knowledge alone (Baumert et al., 2010; Kunter et al., 2013). Towards that end, most educator preparation programs have included courses specifically for the development of PCK (Haston & Leon-Guerrero, 2008; Kind, 2009). These courses, often referred to as ‘methods courses,’ occur towards the end of candidates’ programs of study; typically within the semesters directly preceding student teaching. Combined with actual teaching experience (Kind, 2009; van Driel, Verloop, & de Vos, 1998), the early months of one’s teaching career are found to significantly impact the development of PCK (Simmons, et al., 1999) for educators.

### Analysis of student learning: Developing data literacy

Mandinach and Gummer’s (2016) *Data Literacy for Educators: Making it Count in Teacher Preparation and Practice* state that, “Data literacy for teaching is the ability to transform information into actionable instructional knowledge and practices” (p.14). Their framework describes how schools of education can support the development of data literacy skills (i.e., those skills and ways of knowing necessary to use student data responsibly). Building on an educator’s PCK, data literacy extends beyond simply understanding data and assessments to how data can be utilized to shape classroom practice as a dynamic and fluid process.

If data literacy is required for transformational practices in classrooms, meaning that educators engage in the analysis of all types of data and change it into information that they are then able to enact within learning spaces, then educator preparation programs are uniquely situated to induct and acculturate novice educators in its use (Mandinach & Gummer, 2012). Data literacy requires candidates to be prepared to move beyond assessment literacy (i.e., assessing students and using the results to improve instruction) to create a richer picture of the learner by combining the data with standards, curricular knowledge, PCK, and an understanding of how learners learn (Mandinach & Gummer, 2016). Supported by the CCSSO (2013, 2015) Interstate New Teacher Assessment and Support Consortium (InTASC) standards, data literacy is clearly identified as being integral in the various forms of knowledge, dispositions and skills that are required by teachers.

Data literacy begins with novice educators’ development of the fundamental assessment concepts and procedures used to determine what a learner knows and is able to do (i.e., assessment literacy). “If teachers must produce high levels of achievement among all students, they also need assessment tools that will guide their instructional decision making. With student progress monitoring, data alert teachers when particular students are not progressing at acceptable rates” (Stecker, Lembke, & Foegen, 2008, p.48). Educators learn to use curriculum based measures (CBM) and other tools to ensure that multiple sources and types of metrics (i.e., school climate, behavior, assessment, etc.) are available for analysis. They understand the different kinds of data that exist and understand which kind of data to use for which decision. They analyze the data, transforming and incorporating it into their, “ongoing instructional decision making, determining at what points instructional changes might be necessary” (Hagan-Burke & Jefferson, 2002, p.50)

### Reflection and self-evaluation

Classrooms are “messy places” where educators are often asked to engage in tasks for which they have not been prepared (Schön, 1983). These spaces require them to reflect-in-action using experiences and inferences to guide their practice. To be effective at this, educators must engage in the related processes of self-assessment and self-reflection (Airasian & Jones, 1995). Effective teachers employ their understandings of the types of learning, types of teaching, appropriate learning strategies, their knowledge, colleagues, research, and ability to self-regulate (i.e., metacognition) as they plan, evaluate, and monitor (Ertmer & Newby, 1996). Bryan and Abell (1999) suggest, “reflection stimulates retraining and revising practice” (p.136).

Educators engage in what Bailey (1981) defined as the “process of self-examination for the purpose of instructional self-improvement” (p.7). To determine appropriate student learning goals, they analyze data from students, their performance (i.e., assessments, curriculum reviews, feedback surveys, and/or other sources of information that reflects areas of strength and needs of learners). Analysis of this data enables them to determine and implement instructional improvements in their classrooms so that all learners are able to achieve. They must consider the myriad of teaching strategies and behaviors available to them, when to implement them for maximal benefit, and what the ideal end goal is to determine the path forward between the two-- an iterative reflective practice. However, effective educators use more than reflection, they also incorporate self-assessment and work to actively develop and improve technical skills and classroom practice.

## Method

### Participants

Participants for this study were selected using a stratified random sampling technique. The population to be examined included individuals in their third, fourth, and fifth years of teaching who graduated from one of the educator preparation programs at the university (i.e., “completers” of early childhood; elementary; special education; and secondary education programs). Since variance could be expected to occur between groups, it was determined that it would be advantageous to sample each subpopulation. Each educator preparation programs/subpopulation (early childhood; elementary; special education; and secondary education programs) formed the strata.

All completers who had graduated within the last five years (i.e., Fall 2013-Spring 2016) and who were licensed educators within the state, were placed within their preparation program strata to create a comprehensive list. Following the creation of the comprehensive list, a random number generator was used to select ten percent of completers for participation. In total, twenty-six candidates across the various educator preparation programs at Purdue University Northwest (PNW) were contacted via email (school email addresses were used) to seek their participation in the study. Of those contacted, seven agreed to participate in the study. The seven respondents are completers from the following programs of study: one secondary--English, one special education/dual licensure, one early childhood education, four elementary education, and one middle school (candidates with either elementary (K-6) or secondary (5-12) licensure are eligible to work in middle school environments).

Participants were asked to take part in the following activities as part of the study: a focus group discussion, classroom observation conducted by a faculty member from the School of Education and Counseling (SoEC), and Praxis Performance Assessment for Teachers-Student Surveys (PPAT). Additionally, participating completers were asked to share their previous year’s district teaching evaluation and student performance on the state assessment if they felt comfortable doing so. Finally, statewide measures of program impact data were used to inform the EPP’s completer impact in classrooms. Statewide measures include: principal survey, teacher survey, and effectiveness ratings. Data reported on these measures are based upon the Title II Report that is reported on the Indiana Department of Education website *Educator Preparation Program Comparative Data and Performance Data* (<https://www.doe.in.gov/epps/data-comparative-performance>).

### Instruments

**Focused Group Discussion.** A focus group discussion (FGD) allows researchers to gather individuals from similar backgrounds or experiences to discuss a specific topic of interest (Krueger, 1988). A set of 16 key questions examining instructional decision making, analysis of student learning, and reflection/self-evaluation were constructed by faculty members in the SoEC. Four questions targeted instructional decision making, five targeted assessment of student learning, and seven targeted reflection/self-evaluation. Appendix A includes the Focus Group Discussion Questions, identifying which questions were aligned with the question-type. A faculty member from the SoEC facilitated the FGD.

**Classroom Observation.** Classroom observations allow for the systematic collection of data of educator’s behaviors within an authentic context that can then be used to describe and better understand instructional practices as they occur (Good,1988). For this study, two tools were used by university faculty members when they observed a completer’s classroom practice: the Skills of Teaching Observation Tool (STOT) and the Praxis Performance Assessment for Teachers- Student Surveys (PPAT).

Developed by the North Dakota Association of Colleges for Teacher Education, the STOT was created as a means for determining student teachers’ ability to meet professional standards (InTASC Standards). Created in 2016, there have been two confirmatory factor analyses to establish this tool as both a valid and reliable measure on four factors: the learner and learning context, knowledge, instructional practices, and professional responsibilities.

Designed by the Educational Testing Service, the PPAT-Student Survey is comprised of between 12-15 questions based on the grade range (primary: pre-kindergarten through first grade has 12 questions; elementary: second through fifth/sixth grade has 14 questions; and secondary: sixth/seventh through twelfth grade has 15 questions). When used with students in primary grades, the teacher reads the survey questions to the students and the students circle “Yes (smiling face)” if they agree with the statement and “No (frowning face)” if they disagree. For use with elementary- and middle school-aged students, they are simply asked to circle the answer (never, sometimes, or always) that best describes their experiences in the class in which it is used. Secondary students are asked to mark the number that applies to each statement using the rating system 1=never, 2=rarely, 3=often, 4=most of the time, and 5= always.

A faculty member from the SoEC observed the completer’s classroom using the STOT. At the end of the observation, he/she asked students within the class to complete the PPAT-Student Survey.

**Indiana Teacher Evaluation Tool.** Indiana law requires that each school corporation either develop and implement a staff performance evaluation plan that is approved by the state Department of Education or use Rise Evaluation and Development System (RISE). Whichever model or system a school corporation selects, evaluations must occur annually, include student growth data, and include four rating categories to differentiate between educators (i.e., highly effective, effective, improvement necessary, and ineffective). With the RISE tool, educators are evaluated on their professional practice (planning, instruction, leadership, and core professionalism) and student learning (multiple measures of student academic achievement and growth).

**Indiana Assessments.** In Indiana, every student attending school (public, charter, or accredited nonpublic) is required to take the state assessments. State required assessments are: ILEARN (alternate testing measure: IAM), IREAD-3, ISTEP+ (graduation assessment in grade 10). During the first year of implementation (2018), nearly two-thirds of all Indiana students in grades 3-8 did not pass the ILEARN assessment. If scores for a specific completer’s classroom were not provided, percentage pass rates for the school on ILEARN were used. If scores for a specific teacher’s classroom were not provided, then IREAD-3 percentage pass rates for the school were used. None of the schools where participants taught had large enough populations (10 or greater) of students qualified for the IAM assessment for scores to be reported. Finally, if scores for ISTEP+ were not provided by a completer, then ISTEP+ percentage proficiency rates for the school were used.

**Statewide Reported Measures: Principal Survey.** Indiana code requires that principals in educational institutions “complete a survey that provides information regarding the principal's assessment of the quality of instruction by each particular teacher preparation program located in Indiana for teachers employed at the school who initially received their teaching license in Indiana in the previous two (2) years (IC 20-28-11.5-9). These results are shared with the educator preparation programs each September.

**Statewide Reported Measures: Teacher Survey.**  Recent graduates of educator preparation programs within the state of Indiana are annually surveyed to gather input regarding their perceived preparation for work in classrooms. Results of this survey are compiled and shared with the educator preparation programs by the state department of education each September.

**Statewide Reported Measures: Effectiveness Ratings.** As part of the annual report from the state department of education to educator preparation programs is an effectiveness rating of recent graduates. Data is reported for completers one-, two-, and three-years in the profession who have achieved an “effective” or “highly effective” rating. Totals are aggregated to determine an overall effectiveness rating for the institution.

## Procedure

Participants were contacted via their work email and invited to participate in the EPP Case Study. For their participation, candidates were informed that they would receive *professional growth points*. Professional growth points are part of a Professional Growth Plan, a method to renew a professional educator license in the state of Indiana. Participants were able to participate in one, two, or all parts of the study. A participant’s level of participation indicated the number of professional growth points he/she would receive at the end of the study. One individual participated in all aspects of the study; three participated in both the Focus Group Discussion and Classroom Observation; and three participated only in the Classroom Observation.

**Focus Group Discussion.**The study began with a focus group discussion (Krueger, 1998). Four participants agreed to take part in an hour and a half long focus group discussion (Krueger, 1988) to discuss their preparedness for working in a classroom. A faculty member facilitated the discussion to ensure even participation using the focus group discussion questions constructed for the FGD (see Appendix A). During this process, the facilitator maintained a neutral attitude and appearance. A notetaker was present and recorded participants’ statements. The faculty member who facilitated the FGD provided a summary of the session reflecting the opinions of the participants that was later analyzed by the SoEC research team.

**Classroom Observations**. A total of six completers were observed by three members of the SoEC research team. The research team members contacted the completers who indicated a willingness to be observed and arranged for a date and time to visit their classrooms. During the observation, the team member made notes of his/her observations and recorded ratings on the STOT. At the end of the observation, he/she then administered the PPAT-Student Survey following directions (i.e., reading aloud statements or simply the directions) on the survey with the learners in the completer’s classroom. The results of these two measures, the STOT and the PPAT-Student Survey, were collected and analyzed by the research team.

**Indiana Teacher Evaluation Tool and Indiana Assessments.** Following classroom observations, participants were asked to share their previous year’s annual evaluation with the research team as well as the performance of their students on state-level student performance assessments. Only one completer agreed to share their evaluation, and no student data was collected. Therefore, student performance information was gathered at the school level using data reported on INview a part of the Indiana Department of Education’s website (<https://www.doe.in.gov/accountability/find-school-and-corporation-data-reports>).

**Statewide Reported Measures: Principal, Teacher, Effectiveness.** Data on statewide reported measures of the principal survey, teacher survey, and effectiveness ratings are provided to educator preparation programs each September. Data on these measures are reported on the Indiana Department of Education website *Educator Preparation Program Comparative Data and Performance Data* (<https://www.doe.in.gov/epps/data-comparative-performance>). For the purpose of this investigation, this data served as the means for determining effectiveness of completers.

## Analysis and Results

Data on each of the measures collected were analyzed by the SoEC research team. The focus group discussion data was analyzed qualitatively. Classroom observations (i.e., STOT and PPAT-Student Survey), statewide reported measures (i.e., principal survey, teacher survey, effectiveness ratings), and student performance on Indiana assessments (i.e., IREAD-3, ILEARN, ISTEP+, IAM) were analyzed quantitatively.

***Qualitative Analysis***

A qualitative approach to data analysis was taken to determine meanings and characteristics of completers’ perceptions during the Focus Group Discussion. Using the *a priori* *codes* of instructional decision making, analysis of student learning, and reflection and self-evaluation, the SoEC research team members analyzed the transcripts taken by the notetaker as well as the facilitator’s summary. During this iterative process, research team members identified “a word or short phrase that captures and signals what is going on in a piece of data in a way that links it to some more general analysis issue” (Rossman & Rallis, 2011, p.282). Additionally, memoing, the recording of reflective notes about what researchers were learning as they were analyzing the data, was used to ensure the analysis was credible (Golafshani, 2003). Following independent analysis, team members shared their analysis and memoing to establish trustworthiness.

**Instructional Decision Making.** When determining what pedagogical moves to make within classrooms, completers indicated several approaches to working to ensure learners were learning what was being taught. They highlighted the importance of developing relationships with learners, re-teaching content, relating content to learners and their experiences, as well as working one-on-one with learners to identify where confusion existed (KG, KH, & AH transcript). They specifically indicated that while the course they had in classroom management was helpful in providing resources, that “being ‘thrown into’ a solo classroom” where they had to “find my own style” was necessary (AH transcript). Several comments also indicated that “more experience in teaching” was necessary with exposure to multiple grade levels occurring prior to student teaching to help prepare them for their own classrooms.

**Analysis of Student Learning.** Completers felt that the assessment course they had was beneficial, identifying specifically the creation of formal and informal assessments as part of the course. They indicated the necessity of being positive about learning, use of observation and formal or informal assessments, and their own engagement in helping them to influence students’ learning. They indicated that challenges they felt within the classroom were related to state testing and the pressure they and the students feel in performing on these high stakes tests. One indicated that, “each year kids are getting harder to reach, not motivated and they want to get the grades and go home” (AH transcript). This was further echoed by concerns they had regarding the expectations of rewards and excuses from students where parents take the blame for work being incomplete or left undone. One completer stated that he had received a note from a parent to excuse the child from the previous night’s homework, because they were too busy with extracurricular activities.

**Reflection and Self-Evaluation.** Results of this analysis indicated that completers were reflective on their program of study and/or self-evaluative in nature. Statements from both the transcript and captured in the FGD summary indicated that they “felt well-prepared” (KG, transcript) and supported by faculty members in their programs of study (comments by KG, KH & AH, transcript). Suggestions for improving their preparation fell into two categories: more time spent in classrooms and working with a variety of children. A candidate stated, “I didn’t feel like I was put into the classroom enough” (AH transcript). Others indicated that more work with exceptional learners or who are multilingual learners would be beneficial. One completer stated, “took the course *Inclusion in the Classroom* feel like I learned a lot from it, but being put in the actual situation is harder. I find myself getting more frustrated the more I try to handle the student. Maybe having more courses specifically for special needs would be beneficial” [*sic*] (KG transcript). Another completer identified “A class to help with multilingual learners would be very beneficial. Rather than relying on other bilingual students in my class, I could have known different approaches to try” (KH transcript).

Completers’ responses in the FGD indicate that they are prepared, in general, for the challenges of teaching in the areas of instructional decision making, analysis of student learning, and reflection and self-evaluation. Their responses illustrate the inevitable tensions of course work and on-the-job training. Completers pointed to specific courses and field experiences that supported their development of knowledge, skills and dispositions to perform in the classroom and to make an impact on student learning. The participants in the FGD were forthcoming with suggestions to improve aspects of the EPP, reflecting a professional commitment as well as a self-evaluative stance.

***Quantitative Analysis***

Descriptive statistics were used to determine the basic features of the data for Classroom Observations, Indiana Teacher Evaluation Tool and Indiana Assessments, and Statewide Reported Measures: Effectiveness Ratings were analyzed quantitatively. Average levels of performance were computed on these three measures.

**Classroom Observations.** Analysis of the tools used as part of classroom observations (i.e., the STOT and the PPAT-Student Survey) began by computing average levels of performance for completers. These averages are found in Table 1: Average Performance of Completers on STOT--Observation Tool. On this tool, performance level is rated on a scale from 1 to 4 including half point ratings to occur, where 1 is considered “Underdeveloped” and 4 is considered “Distinguished.” The expectation of the EPP is that candidates will achieve a “Proficient” (score of 3) or higher level at the completion of their program.

The participating completers were rated in nine of the ten InTASC standards. Standard 9: Professional Learning and Ethical Practice was not observed. To observe this would require a longer period of time spent in the classroom and with the completer. Important to note, however, is that a completer’s willingness to participate in this investigation may indicate a disposition towards professional growth.

Table 1: Average Performance of Completers on STOT-- Observation Tool

**Completers’ Average Performance on STOT**

| InTASC Standard | Construct/Area of Knowledge | ItemNumbers | Average  |
| --- | --- | --- | --- |
| **Standard 1: Learner Development**. The teacher understands how children learn and develop, recognizing that patterns of learning and development vary individually within and across the cognitive, linguistic, social, emotional, and physical areas, and designs and implements developmentally appropriate and challenging learning experiences. | The Learner and Learning | 1-2 | 3.19 |
| **Standard 2: Learning Differences.** The teacher uses understanding of individual differences and diverse communities to ensure inclusive learning environments that allow each learner to meet high standards. | The Learner and Learning | 3-4 | 3.25 |
| **Standard 3: Learning Environments**. The teacher works with learners to create environments that support individual and collaborative learning and that encourage positive social interaction, active engagement in learning, and self-motivation. | The Learner and Learning | 5-9 | 3.45 |
| **Standard 4: Content Knowledge**. The teacher understands the central concepts, tools of inquiry, and structures of the discipline(s) he or she teaches and creates learning experiences that make these aspects of the discipline accessible and meaningful for learners to assure mastery of the content. | Content Knowledge | 10-12 | 3.38 |
| **Standard 5: Applications of Content**. The teacher understands how to connect concepts and use differing perspectives to engage learners in critical/creative thinking and collaborative problem solving related to authentic local and global issues. | Content Knowledge | 13-16 | 3.15 |
| **Standard 6: Assessment**. The teacher understands and uses multiple methods of assessment to engage learners in their own growth, to monitor learner progress, and to guide the teachers’ and learner’s decision making. | Instructional Practice | 17-20 | 3.38 |
| **Standard 7: Planning for Instruction**. The teacher plans instruction that supports every student in meeting rigorous learning goals by drawing upon knowledge of content areas, cross-disciplinary skills, and pedagogy, as well as knowledge of learners and the community context. | Instructional Practice | 21-24 | 3.5 |
| **Standard 8: Instructional Strategies**. The teacher understands and uses a variety of instructional strategies to encourage learners to develop a deep understanding of content areas and their connections, and to build skills to apply knowledge in meaningful ways. | Instructional Practice | 25-28 | 3.37 |
| **Standard 9: Professional Learning and Ethical Practice**. The teacher engages in ongoing professional learning and uses evidence to continually evaluate his/her practice, particularly the effects of his/her choices and actions on others (learners, families, and other professionals, and the learning community), and adapts practice to meet the needs of each learner. | Professional Responsibility | 29-32 | Not Observed |
| **Standard 10: Leadership and Collaboration**. The teacher seeks appropriate leadership roles and opportunities to take responsibility for student learning, to collaborate with learners, families, colleagues, other professionals, and community members to ensure learner growth, and to advance the profession. | Professional Responsibility | 33-34 | 3.25 |

Across the observed InTASC standards, completers achieved the “Proficient” or higher level. Ratings on Standard 7: Planning for Instruction and Standard 3: Learning Environments were the highest at 3.5 and 3.4 respectively. This indicates that completers were observed to plan a variety of learning experiences aligned with learning goals and standards and to develop engaging learning environments that were respectful of all learners’ differences. Completers were rated lowest in Standard 5: Applications of Content (3.15) and Standard 1: Learner Development (3.19). While completers were found to connect content to relevant learning tasks and design activities for learners to engage with the content from various perspectives, it was not clear how learners were being asked to engage with the content to build global awareness. Further, completers were observed to provide instruction that was developmentally appropriate. However, it was not clear during the observations how individual differences were taken into account in their delivery.

In addition to the STOT, the learner responses on the PPAT-Student Survey administered by the SoEC research team member at the end of classroom observations were converted into average scores per item. Learner responses on the elementary PPAT-Student Survey, used in both elementary and middle school classrooms, were converted to numerical scores (Never = 1, Sometimes =2, Always =3) and a classroom average determined for each of the survey items. This tool provided a means for student expression of their issues, needs and desires which can be used by educators to change instruction and help learners perform better. An average performance on this survey for elementary/middle school educators that falls between “Sometimes” (2) and “Always” (3) suggests that educators are considering student learning issues, needs and desires when providing instruction so that they are able to increase in their performance within the classroom. Averages for students from the two elementary and three middle school classrooms are found in Table 2: Average Student Response on PPAT in Elementary/Middle School Classrooms.

Table 2: Average Student Response on PPAT in Elementary/Middle School Classrooms

| Item | CR1 | CR 2 | CR 3 | CR 4 | CR 5 | AVG |
| --- | --- | --- | --- | --- | --- | --- |
| 1. Learning is exciting in this class | 2.00 | 2.43 | 2.75 | 2.35 | 2.38 | 2.38 |
| 2. I believe I can learn in this class | 2.65 | 2.90 | 2.75 | 2.83 | 2.85 | 2.80 |
| 3. I understand the classroom rules and procedures | 2.81 | 2.90 | 2.80 | 2.87 | 2.85 | 2.85 |
| 4. I feel safe in the classroom | 2.76 | 3.16 | 2.70 | 2.61 | 2.73 | 2.79 |
| 5. I think about what is going on inside my head while I am learning | 2.14 | 2.50 | 2.15 | 2.04 | 2.20 | 2.21 |
| 6. My schoolwork helps me learn | 2.57 | 2.67 | 2.65 | 2.57 | 2.67 | 2.63 |
| 7. When I make a mistake, I am encouraged to fix it. | 2.48 | 2.62 | 2.55 | 2.74 | 2.62 | 2.60 |
| 8. When I don’t understand something, I receive help in this class | 2.67 | 2.52 | 2.65 | 2.57 | 2.57 | 2.60 |
| 9. I learn when I work with partners or in groups in this class | 2.26 | 2.43 | 2.45 | 2.39 | 2.35 | 2.38 |
| 10. I make predictions and find out if they are correct | 2.25 | 2.38 | 2.60 | 2.52 | 2.62 | 2.47 |
| 11. My teacher notices when I am not learning | 2.45 | 2.38 | 2.50 | 2.30 | 2.34 | 2.39 |
| 12. I answer questions and share what I think in class | 2.30 | 2.10 | 2.32 | 1.83 | 2.18 | 2.15 |
| 13. My teacher wants to know about me | 2.50 | 2.25 | 2.40 | 2.35 | 2.37 | 2.37 |
| 14. My teacher always knows what is going on in our classroom | 2.86 | 2.68 | 2.85 | 2.65 | 2.76 | 2.76 |

The average student responses for completers teaching in elementary or middle school classrooms fall between “Sometimes” (2) and “Always” (3) on each of the items assessed. Students indicated that completers (i.e., their teachers) created classroom environments that were safe, in which they knew the expectations, and where the teacher knew what was going on indicating that completers were effective in creating learning environments in which they were able to learn. Students rated their teachers lowest in areas related to their engagement with learning in the classrooms. The students indicated that they did not often answer questions or share what they were thinking nor that they often thought about what was going on internally as they engaged in instruction.

The PPAT-Student Survey administered in a high school classroom is comprised of 13 items where students are asked to indicate their response to the statement using a rating system of “1=never, 2=rarely, 3=often, 4=most of the time, and 5=always.” Additionally, the survey includes two open-ended responses for learners to indicate what they have found helpful for their learning and to offer suggestions for changes that would improve their learning. No students in the completer’s classroom provided any feedback on these questions. An average performance on this survey for high school educators that falls between “Often” (3) and “Always” (5) suggests that educators are considering student learning issues, needs and desires when providing instruction so that they are able to increase in their performance within the classroom. Students rated their teacher highest on the statement “My teacher is aware of everything that is happening in the classroom” indicating competency in managing the classroom environment. Table 3: Average Student Response on PPAT in High School Classrooms represents this data.

Table 3: Average Student Response on PPAT in High School Classrooms

| Item | CR1 |
| --- | --- |
| 1. I understand the classroom rules and expectations in this class  | 4.35 |
| 2. I receive clear and timely feedback on homework and projects so that I can improve my learning | 3.20 |
| 3. I am engaged in this class | 2.75 |
| 4. I problem solve and think critically through my learning experiences in this class | 3.05 |
| 5. I am comfortable talking with my teacher | 4.30 |
| 6. The classwork and homework enhance my learning | 2.85 |
| 7. I know how to get help with assignments and learning | 3.10 |
| 8. My teacher wants to know about me and listens when I talk | 3.85 |
| 9. My teacher is aware of everything that is happening in the classroom | 4.65 |
| 10. I believe that I can learn in this classroom | 4.20 |
| 11. I can explain my thinking verbally and in writing | 2.65 |
| 12. I learn effectively in small groups | 3.15 |
| 13. Learning is exciting in this class | 3.05 |

**Indiana Teacher Evaluation Tool and Indiana Assessments.** Data from the previous year’s annual evaluation of teaching from one of the completers is found in Table 5: Annual Principal Evaluation of Completer’s Teaching. Analysis of the data indicates that the evaluator found the completer to be either “Effective” or “Highly Effective” in all domains observed. Specific areas of strength for the completer are seen in the domains of Planning (rated as “Highly Effective” on 67% of indicators) and Instruction (rated as “Highly Effective” on 70% of indicators). While the completer was considered to be “Effective” in the domain of Managing the Learning Environment, this was the lowest rated domain on the evaluation. On this domain, the completer was rated as “Highly Effective” on only 33% of indicators.

Table 5: Annual Principal Evaluation of Completer’s Teaching

| Domain Assessed | Completer’s Rating |
| --- | --- |
| **1. Planning** |
| Instruction aligned to curriculum map and indicators | Effective |
| Organization | Highly Effective |
| Models expectations | Highly Effective |
| **2. Instruction** |
| Communicates purpose of learning | Effective |
| Application of background knowledge across content areas to real world | Highly Effective |
| Transition between teaching tools | Highly Effective |
| Differentiation of Learning (DOK) | Highly Effective |
| Questioning techniques | Effective |
| Application of learning | Highly Effective |
| Routines for distributive practice | Highly Effective |
| Extension of Learning | Effective |
| Opportunities for students to summarize learning | Highly Effective |
| Opportunities to utilize technology | Highly Effective |
| **3. Managing the Learning Environment** |
| Instruction and redirection | Highly Effective |
| Student-to-student interaction | Highly Effective |
| Redirection of inappropriate behavior | Effective |
| Awareness of the classroom | Effective |
| Communication of classroom procedures | Effective |
| Physical space conducive to learning | Effective |
| **4. Professional Responsibilities** |
| Attendance | Not Observed |
| Adheres to school policies for record keeping | Not Observed |
| Models the “5 Critical Values” | Not Observed |
| Supervision of students | Not Observed |
| Contribution to school/corporation projects | Not Observed |
| Professional growth | Not Observed |

Since the research team was not provided with access to student performance data on state assessments within completers’ classrooms, schoolwide data reported by the Indiana Department of Education was used. Table 6: Student Performance on State Assessments by Completer School illustrates the average percentage of students considered to be performing at or above “Proficient” level for their grade levels on specific state assessments. As indicated in Table 6, schools in which participants in this study work performed the highest on the IREAD-3 assessment. For both schools (D and E) where the assessment was administered, a majority of students were assessed to be proficient ( 71.4% school D and 87.5% school E). However, similar levels of proficiency were not seen on the other measures: ILEARN and ISTEP+. It is important to note that during the first year of implementation (2018), nearly two-thirds of all students in grades 3-8 were not assessed to be proficient on the ILEARN assessment. Examining Table 6 in light of the state’s overall percentage proficiency rate of 33%, three of the completer schools (schools C, D, and E) performed at or above the average percentage rate when calculating the “Total Pass.” Further, School A’s Total Pass percentage approximates the state average. Only one of the schools, School B did not achieve a total percentage proficient rate comparable to the state’s. Student performance for the ISTEP+ for this school also was low with only 25.4% achieving proficiency on the graduation assessment. While research does indicate that the outcomes of standardized tests do not necessarily reflect the quality of instruction students receive in classrooms, low levels of proficiency may indicate difficulties with curricular alignment, a mismatch between testing and classroom objectives, and variation in educational opportunities and experiences.

Table 6: Student Performance on State Assessments by Completer School



**Statewide Reported Measures: Effectiveness Ratings.** Each September, Educator Preparation Programs (EPP) within the state are provided with performance data and effectiveness ratings. Ratings from principal and teacher survey instruments and an effectiveness ratings by novice teacher performance as measured on annual evaluations is provided. Further, EPP’s performance data is compiled and posted on the Department of Education’s website for comparative purposes.

Table 7: Statewide Average of Ratings of Teacher Effectiveness indicates that across the state, 96% of novice educators are found to be effective. Novice educators from PNW are found to perform similarly as is indicated in Table 8: EPP Comparative and Performance Data-- Effectiveness Ratings. This table provides an overall effectiveness ratings for teachers with one, two, and three years of experience who graduated from PNW. As indicated, 96% of novice educators who received their preparation at PNW are considered to be “Effective” or “Highly Effective” in their classrooms.

Table 7: Statewide Average of Ratings of Teacher Effectiveness

**Percentage of Teachers Achieving Effective or Highly Effective Rating 2017-2018**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Teachers with One (1) Year Experience** | **Teachers with Two (2) Years of Experience** | **Teachers with Three (3) Years of Experience** |  |
| **Institution** | **Effective** | **Highly Effective** | **Total of Teachers Evaluated** | **Effective** | **Highly Effective** | **Total of Teachers Evaluated** | **Effective** | **Highly Effective** | **Total of Teachers Evaluated** | **Grand Totals** |
| **Purdue University Northwest** | **97** | **21** | **126** | **119** | **39** | **161** | **96** | **60** | **161** |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **Grand Total Rated Effective** |  |  |  |  |  |  |  |  |  | **312** |
| **Grand Total Rated Highly Effective** |  |  |  |  |  |  |  |  |  | **120** |
| **Grand Total Effective and Highly Effective** |  |  |  |  |  |  |  |  |  | **432** |
| **Grand Total Teachers Evaluated** |  |  |  |  |  |  |  |  |  | **448** |
| **Final Percent** |  |  |  |  |  |  |  |  |  | **96%** |

**\*"Year" defined as September 1 - August 31.**

**Visit http://www.doe.in.gov/evaluations for additional information.**

Table 8: EPP Comparative and Performance Data-- Effectiveness Ratings

An analysis of Principal Survey data, Table 9: Comparative and Performance Data--Principal Survey for PNW Completers, illustrates that 94% of principals indicate that they are “satisfied” or “very satisfied”with the training that PNW program completers received. When examining responses related to the domain of knowledge, 100% of principals indicated that completers are prepared to adhere to ethical and legal requirements of the teaching profession; and 96% indicated that completers understand how students learn and meet expectations for content preparation and knowledge. When examining principals’ perceptions of completers’ pedagogical preparation, 100% indicated that completers are prepared to analyze assessment data to improve instruction and that they are able to integrate technological tools to advance student learning. Further, 98% indicated that completers are prepared to provide an inclusive learning environment and work effectively with exceptional learners. Of the respondents, 96% indicated completers are prepared to provide appropriate and challenging learning experiences, and to use a variety of assessment methods to guide and improve instruction. When considering completers’ preparation for providing a rigorous learning environment, the development of content specific assessments, and ability to differentiate instruction, 94% indicated that they are “satisfied” or “very satisfied.” The lowest area of rating in pedagogical preparation of completers on the survey is found in their ability to use effective strategies to manage the learning environment with only 92% of respondents indicating that “satisfied” or “very satisfied” ratings. An examination of principals’ responses related to the domain of professional disposition preparation indicates that 100% of respondents were “satisfied” or “very satisfied” with completers’ preparation to openly accept suggestions/constructive feedback and to exhibit ethical practice. The responses show that 98% of principals indicate that completers are prepared to work effectively with school leaders and within the school culture, while 96% indicate that they are prepared to work effectively with other professionals. The lowest ratings in dispositional preparation was found in completers’ ability to work effectively with parents/guardians with 94% of respondents indicating “satisfied” or “very satisfied.” **Percentage of Teachers Achieving Effective or Highly Effective Rating 2017-2018**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Teachers with One (1) Year Experience** | **Teachers with Two (2) Years of Experience** | **Teachers with Three (3) Years of Experience** |  |
| **Institution** | **Effective** | **Highly Effective** | **Total of Teachers Evaluated** | **Effective** | **Highly Effective** | **Total of Teachers Evaluated** | **Effective** | **Highly Effective** | **Total of Teachers Evaluated** | **Grand Totals** |
| **Purdue University Northwest** | **97** | **21** | **126** | **119** | **39** | **161** | **96** | **60** | **161** |  |
|  |  |  |  |  |  |  |  |  |  |  |
| **Grand Total Rated Effective** |  |  |  |  |  |  |  |  |  | **312** |
| **Grand Total Rated Highly Effective** |  |  |  |  |  |  |  |  |  | **120** |
| **Grand Total Effective and Highly Effective** |  |  |  |  |  |  |  |  |  | **432** |
| **Grand Total Teachers Evaluated** |  |  |  |  |  |  |  |  |  | **448** |
| **Final Percent** |  |  |  |  |  |  |  |  |  | **96%** |

**\*"Year" defined as September 1 - August 31.**

**Visit http://www.doe.in.gov/evaluations for additional information.**

Table 9: EPP Comparative and Performance Data-- Principal Survey for PNW Completers

**EPP Comparative and Performance Data-- Principal Survey Results for PNW**

Principals are responding to statements divided into three domains (knowledge, disposition, and performance) and reflect elements of both national professional standards (NCATE/CAEP) and the Model Core Teaching Standards, Interstate Teacher Assessment and Support Consortium (InTASC). EPPs are expected to meet these standards in order to prepare educators for licensure (511 IAC 13-1-1).

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Knowledge Preparation of Teacher** |  |  |  |  |
| For each of the following, please provide your assessment of how well the EPP prepared this teacher in the following categories. The range is from 1 (strongly disagree) to 4 (strongly agree). | Strongly Disagree | Disagree | Agree | Strongly Agree |
|  | (1) | (2) | (3) | (4) |
| ***The EPP did an outstanding job of preparing this teacher to…*** |  |  |  |  |
| 1. ...understand how students learn and develop at the grade level they are teaching. | 0 | 2 | 36 | 15 |
| 2. ...meet expectations of a beginning teacher for content preparation and knowledge. | 0 | 2 | 32 | 19 |
| 3. ...adhere to the ethical requirements of the teaching profession. | 0 | 0 | 23 | 29 |
| 4. ...adhere to the legal requirements of the teaching profession. | 0 | 0 | 27 | 26 |
|  |  |  |  |  |
| **Pedagogical Preparation of Teacher** |  |  |  |  |
| ***The EPP did an outstanding job of preparing this teacher to…*** |  |  |  |  |
| 5. ...provide an appropriate and challenging learning experience. | 0 | 2 | 36 | 15 |
| 6. ...provide an inclusive learning environment. | 0 | 1 | 41 | 11 |
| 7. ...provide a rigorous learning environment. | 0 | 3 | 38 | 12 |
| 8. ...use a variety of assessment methods to guide, adjust, and improve instruction. | 0 | 2 | 39 | 11 |
| 9. ...develop content specific assessments to test for student understanding of the lesson objectives. | 0 | 3 | 40 | 10 |
| 10. ..differentiate instruction to meet all students’ learning needs. | 0 | 3 | 41 | 9 |
| 11. ..work effectively with students with all exceptionalities. | 0 | 1 | 40 | 12 |
| 12. ..analyze student assessment data to improve classroom instruction. | 0 | 0 | 44 | 9 |
| 13. ..use effective strategies to manage the learning environment. | 2 | 2 | 39 | 10 |
| 14. ..integrate technological tools as appropriate to advance student learning. | 0 | 0 | 36 | 17 |
|  |  |  |  |  |
| **Professional Disposition of Teacher** |  |  |  |  |
| ***The EPP did an outstanding job of preparing this teacher to…*** |  |  |  |  |
| 15. …openly accept suggestions/constructive feedback. | 0 | 0 | 21 | 32 |
| 16. …exhibit ethical practice expected of educators. | 0 | 0 | 18 | 35 |
| 17. …work effectively with other professionals. | 0 | 2 | 22 | 29 |
| 18. …work effectively with parents/guardians. | 1 | 2 | 28 | 22 |
| 19. …work effectively with school leaders. | 0 | 1 | 18 | 34 |
| 20. …work effectively within the school culture. | 0 | 1 | 22 | 26 |
| **Overall Assessment** | Very Dissatisfied | Dissatisfied | Satisfied | Very Satisfied |
| 21. Overall, how satisfied are you with the training this teacher received from this EPP? | 0 | 2 | 29 | 21 |

When viewed in aggregate, data from the EPP Comparative and Performance Data: Principal Survey for PNW Completers indicate that building administrators perceive completers to be applying the knowledge, skills, and dispositions they learned in their preparation program. It also indicates that principals see completers exhibit these understandings ethically and in adherence with the legal requirements of teaching; that completers analyze student assessment data to improve classroom instruction; that they integrate technological tools to advance student learning; and that they are open and accepting of suggestions/constructive feedback. While no area in the data indicates perceived levels of performance that are concerning, it does appear that consideration for how candidates might be afforded more opportunities to develop and practice effective strategies for creating productive learning environments and to work effectively with parents/guardians should occur.

An analysis of Teacher Survey data in Table 10: EPP Comparative and Performance Data: Teacher Survey for PNW Completers shows that 92% of completers indicate that their PNW preparation program was “good” or “excellent.” When examining responses related to the domain of knowledge, 97% of respondents indicate that they felt prepared to adhere to the ethical requirements of the teaching profession; 95% indicate that they were prepared to adhere to the legal requirements. 94% of completers indicate that they were prepared to understand how students learn and that they recognized the importance of continued professional development. Only 92% felt that they were prepared to meet expectations for content preparation and knowledge. When examining completers’ perceptions of their pedagogical preparation, 95% indicate that they were prepared to provide inclusive learning environments and to work collaboratively with school leaders and/or colleagues to create a safe and positive learning environment. Further, 94% indicate that they were prepared to differentiate instruction to meet the needs of all learners; 92% indicate that they felt prepared to work effectively with exceptional learners, to develop quality assessments to assess learners’ understandings of lessons, and to provide a rigorous learning environment; and 91% indicate that they were prepared to provide appropriate and challenging learning experiences. The lowest areas of rating in pedagogical preparation is found in their perceived preparedness in the use of appropriate strategies to effectively manage learning experiences and the integration of technological tools to advance student learning with only 89% of respondents indicating that they were “satisfied” or “very satisfied;”while, 88% indicated that they felt prepared to analyze student assessment data to improve classroom instruction. An examination of completers’ responses in the domain of professional disposition preparation indicates that 97% of respondents were “satisfied” or “very satisfied” with their preparation to openly accept suggestions/constructive feedback, to exhibit ethical practice, and to work effectively with other professionals. Of the respondents, 94% of completers indicated that they felt prepared to work effectively within the school culture, while 92% indicated that they were prepared to work effectively with school leaders. The lowest ratings in dispositional preparation is found in completers perceived ability to work effectively with parents/guardians with 88% of respondents indicating “satisfied” or “very satisfied.”

Table 10: EPP Comparative and Performance Data: Teacher Survey for PNW Completers

Teacher Survey

|  |  |
| --- | --- |
| **Teacher Survey Results for Purdue University Northwest** |  |
| The range is from 1 (strongly disagree) to 4 (strongly agree). Teachers responded to each of the following: | **Number of Responses** |
| **Strongly Disagree** | **Disagree** | **Agree** | **Strongly Agree** |
| **Knowledge Preparation** | **(1)** | **(2)** | **(3)** | **(4)** |
| ***My educator preparation program prepared me for:*** |  |  |  |  |
| 1. understanding how learners/students develop and grow. | 3 | 1 | 23 | 39 |
| 2. meeting the content preparation and knowledge level expected of a beginning teacher. | 4 | 1 | 24 | 37 |
| 3. adhering to the ethical requirements of the teaching profession. | 2 | 0 | 21 | 43 |
| 4. adhering to the legal requirements of the teaching profession. | 2 | 1 | 24 | 39 |
| 5. recognizing the importance of continued professional development. | 2 | 2 | 23 | 39 |
| **Pedagogical Preparation** |  |  |  |  |
| ***My educator preparation program prepared me for:*** |  |  |  |  |
| 6. providing appropriate and challenging learning experiences. | 3 | 3 | 25 | 35 |
| 7. providing an inclusive learning environment. | 2 | 1 | 22 | 41 |
| 8. providing a rigorous learning environment. | 3 | 2 | 25 | 36 |
| 9. working collaboratively with school leaders and/or colleagues to promote safe and positive learning environments. | 2 | 1 | 20 | 43 |
| 10. differentiating instruction to meet all students’ learning needs. | 2 | 2 | 24 | 38 |
| 11. working effectively with students with all exceptionalities. | 2 | 3 | 24 | 37 |
| 12. developing quality assessments to test for student understanding of lessons. | 2 | 3 | 29 | 32 |
| 13. analyzing student assessment data to improve classroom instruction. | 2 | 6 | 27 | 31 |
| 14. using appropriate strategies to effectively manage learning environments. | 3 | 4 | 27 | 32 |
| 15. integrating technological tools as appropriate to advance student learning. | 2 | 5 | 24 | 35 |
| **Professional Disposition Preparation** |  |  |  |  |
| ***My educator preparation program prepared me to recognize the importance of:*** |  |  |  |  |
| 16. openly accepting suggestions/constructive feedback. | 2 | 0 | 19 | 45 |
| 17. exhibiting ethical practice. | 2 | 0 | 19 | 45 |
| 18. working effectively with other professionals. | 2 | 0 | 18 | 46 |
| 19. working effectively with parents/guardians. | 2 | 6 | 24 | 34 |
| 20. working effectively with school leaders. | 2 | 2 | 19 | 43 |
| 21. working effectively within the school culture. | 2 | 2 | 20 | 42 |
|  |
| **Overall Assessment** | **Poor** | **Fair** | **Good** | **Excellent** |
| 22. Indicate your overall assessment of how well you were prepared to teach by your educator preparation program. | **0** | **5** | **20** | **41** |

When viewed in aggregate, data from Table 10: EPP Comparative and Performance Data: Teacher Survey for PNW Completers indicate that completers perceive that they are applying the knowledge, skills, and dispositions they learned in their preparation program. It also indicates that completers exhibit these understandings ethically; that they provide inclusive learning environments; that they work collaboratively with school leaders and/or colleagues to promote safe and positive learning environments; that they are open and accepting of suggestions/constructive feedback; and that they feel that they were prepared to work effectively with other professionals. Data from the Teacher Survey and the Principal Survey demonstrates some alignment between the two and that no area in the data indicates perceived levels of preparedness that are concerning. However, as revealed in the Principal Survey, it does appear that consideration for how candidates might be afforded more opportunities to develop and practice effective strategies for creating productive learning environments and ones in which they are able to work effectively with parents/guardians should occur.

***Conclusion***

Making instructional decisions is key to providing instruction that positively impacts the learning and development of students. Therefore, many Educator Preparation Programs (EPPs) focus on providing candidates with opportunities where they develop instructional decision-making skills concerning what content and processes to teach and how to best organize and deliver content in the most effective ways possible. Inherent in this process is an educator’s ability to analyze the learning occurring within their classroom, and to reflect on their role in the learning process.

This study attempted to ascertain the impact of completers of one EPP on the learning of students in their classrooms through their use of instructional-decision making, analysis of student learning, and reflection and self-evaluation. Across all measures, evidence indicates that completers are able to identify approaches and pedagogical moves necessary to create engaged learning environments. Principals evaluated them to be either “effective” or “highly effective” in planning and providing instruction. Their classroom environments are safe spaces where learners understand what is expected of them.

The data also demonstrate that completers felt prepared to use observation and other informal and formal assessments to understand the learners in their classroom. Principals overwhelmingly indicated that completers were prepared to analyze data to improve instruction within their classrooms. These novice educators further asserted that they were prepared to understand how students learn. Completers, however, indicated that opportunities to learn more about state testing and how to alleviate the pressure of these assessments for learners would have been helpful.

When considering the roles of reflection and self-evaluation in the teaching and learning process, completers indicated that they were prepared to meet the challenges of classrooms by their preparation program. They further asserted the import and value of professional development in their ability to be effective educators. Even though principals assessed completers as being “effective” or “highly effective” in providing inclusive, rigorous, and challenging instruction, completers indicated a desire to have spent more time in classrooms working with a variety of learners (i.e., learners with exceptionalities, multilingual learners) prior to having their own classroom.

Throughout the data, completers emphasized the value of relationships, working one-on-one with learners, and providing a variety of learning experiences for students in their classrooms. Their ability to connect content to relevant learning tasks and design activities for learners to engage with the content from various perspectives was observed. Principals indicated that they were “satisfied” or “very satisfied” in the training completers received from the EPP.

Overall, the data support that completers perceive and are perceived to be making instructional decisions that positively impact the learning in their classrooms. They indicate and are perceived to use analysis of student data in this decision making process. Their understanding of content and pedagogical content knowledge is seen in their classroom practices, the expectations of performance they communicate to learners, and learner performance on assessments.

From the data, it is also clear that the EPP can and should do more to support candidates prior to graduation to develop their sense of self-efficacy related to instructional decision making and analysis of student learning. Towards this end, the EPP is piloting a year-long residency experience this spring. The year-long experience, called the Professional Year, places candidates in classrooms for extended periods of time (three-consecutive days the first semester and five-consecutive days the final semester). This extended period of time seeks to address completers’ desires for more time in classrooms and has the opportunity for candidates to learn more about statewide assessments and tools for mitigating the pressure students feel during this time. Further, the EPP has employed a new field experience plan and monitoring system to ensure that candidates are placed in a variety of grade levels, within diverse school settings (e.g., rural, urban, suburban; ethnic, socioeconomic, linguistic, etc.). The new system has formalized placement processes, created a streamlined process for candidate placement that involves interviewing, and seeks to provide a multitude of learning opportunities from which candidates are able to learn and grow.

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