

Intervention Strategies to Improve Student Disposition

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The purpose of this paper is to provide information on the development of intervention strategies, in the form of an SSST handbook to be used in conjunction with the disposition evaluation instrument (DEI) at Drury University, and report statistical findings regarding the administration of the DEI during the spring 2005 semester at Drury University. Anecdotal evidence from the usage of the SSST handbook will also be provided.

The development and revision of the DEI

Drury University, established in 1873 is a private, liberal arts university located in Springfield, MO. Drury also has an extensive evening college division with locations in St. Robert, Fort Leonard Wood, Rolla, Lebanon, Cabool, Ava, and Thayer, all in southern Missouri. Students are able to complete the Bachelor of Science in Education at the main campus in Springfield (through the regular day school, known as Drury College, or the evening division, known as the College of Graduate and Continuing Studies); or at the Mid-Missouri Region located in St. Robert, MO. Education courses are offered at all of the remaining evening college locations, but degree completion is restricted to Springfield and St. Robert.

The School of Education and Child Development at Drury University consists of ten full-time tenure track faculty, several part-time faculty, and adjuncts. Four of the full-time tenure track faculty are based at the Mid-Missouri Region in St. Robert, MO. Drury certifies 90-100 students to teach each academic year.

Drury University is an NCATE accredited institution and subsequently follows the guidelines delineated by that organization. With the increasing emphasis by NCATE on student disposition, teacher training institutions are required to collect data relative to this. In the fall of 2001, the authors began collecting literature on student disposition and how to measure it. During the following year the authors collaborated on a paper that was accepted for presentation at the 2003 AACTE conference in New Orleans, LA (Williamson and White, 2003).

During departmental meetings in the spring of 2003, the DEI was field tested and modified. The faculty of the School of Education and Child Development met in the summer of 2003 and gave approval to the use of the original DEI. In November 2003, the developers of the DEI participated in the Second Annual Symposium on Educator Dispositions at Eastern Kentucky University (White and Williamson, 2003). Comments and suggestions were solicited from conference participants regarding the usability of the DEI.

Following the conference a decision was made to modify the DEI. Upon reflection, the authors decided that since Drury emphasizes the Comer School Development Program and has built its entire teacher education program upon this philosophy, it would be useful to align the DEI with the Comer program. The original areas of the DEI were replaced by new categories based upon Comer's Developmental Pathways (Social, Cognitive, Physical, Ethical, Psychological, and Language). The results of this modification were presented at the Third Annual Symposium on Educator Dispositions at Eastern Kentucky University (White, Williamson, & Bice, 2004).

The original 55 indicators that had been divided among the areas were analyzed to determine which of the six Pathways they aligned with. Each indicator is evaluated by the student and assigned one of four possible levels: 1) not at all or never exhibits the behavior; 2) sometimes exhibits the behavior; 3) usually exhibits the behavior; and 4) all the time or always exhibits the behavior). The revised form was approved by the faculty of the School of Education and Child Development in April 2004 and was immediately put to use. A subsequent revision in January 2005 resulted in the elimination of twelve indicators and the ability to place the DEI on one single-sided sheet. The revised DEI is found in the appendix of this paper.

Comer's developmental pathways

Dr. James Comer utilizes “a metaphor of six developmental pathways to characterize the lines along which children mature – physical, cognitive, psychological, language, social, and ethical” (Comer, Ben-Avie, Haynes & Joyner, 1999, p. 3). The developmental pathways require a review of “the central core of teaching and learning, which is usually defined as curriculum and instruction (which has now been) expanded to include child development and relationships” (Gillette, 1995, p. 75). Teaching and learning must use child development as an educational foundation and relationships as the “vehicle for learning” (Gillette, 1995, p. 81) to provide an effective schooling experience. The complexity of the developing children requires that educators view them in a holistic manner. The developmental pathways act as “a thread that makes sense by looking at its place in the whole tapestry” (Gillette, 1995, p. 79).

One of the most crucial components of the SDP model involves the six developmental pathways. Too often educators focus only upon the physical or cognitive

development of children, and as we are aware, children of poverty frequently lag behind their peers in these areas. According to developmental pathways theory, children not only develop physically and cognitively, they also develop socially, ethically, linguistically, and psychologically. Educators must focus their attention upon each of these areas for children to develop well. The developmental pathways of Dr. Comer incorporate all of these areas: social, ethical, physical, cognitive, language, and psychological. Each of these is discussed below.

The Social Pathway

The social development of students is enhanced by healthy interpersonal relationships in a wide variety of social settings. Learning is a social enterprise and can be enhanced when students have the opportunity to work collaboratively on complex, structured group activities. Social development also implies the gaining of skills and expertise to be comfortable in varied social contexts (Comer et. al, 1999).

The Ethical Pathway

The ethical development of students involves the ability to reason and make conscious decisions to behave in certain ways. Children develop ethically in the transition from distinguishing between desirable and undesirable behaviors to possessing the ability to understand ethical principles and using these principles to regulate their own actions (Comer et. al, 1999). Other research has been conducted on this phase of development by Kohlberg (1984) and Gilligan (1982).

The Physical Pathway

The physical development of students refers to the biological maturation of the child. It involves more than the obvious manifestations of size, shape, and physical

characteristics. It also includes hand-eye coordination, dexterity, visual acuity, and auditory perception (Comer et. al, 1999).

The Cognitive Pathway

The cognitive developmental pathway involves the capacity to think, plan, solve problems, and accomplish goals (Comer et. al, 1999). Within this developmental pathway the child's ability to think and to use his or her mind to handle challenges is addressed. The cognitive component emphasizes flexibility of thought, the aptitude to manipulate information, and the skill to manipulate the environment (School Development Program, 2001).

The Language Pathway

The language developmental pathway builds the capacity for receptive and expressive language in a variety of contexts (Comer et. al, 1999). Cognitive development is mediated through language. This pathway involves the ability to receive and express oneself through both spoken and written language (School Development Program, 2001).

The Psychological Pathway

The psychological developmental pathway involves self-confidence, self-esteem, the ability to gain control over individual feelings, and to accept oneself (Comer et. al, 1999). Increasing the capacity for acceptance and confidence in oneself during the ongoing process of identity formation is the focus of the psychological pathway (School Development Program, 2001).

Statistical analysis for spring 2005 administration of DEI

The DEI was utilized in several courses during the spring 2005 semesters. Student responses were collected and analyzed using an ANOVA to determine if there were any

statistically significant differences among the various courses with regard to students' perception of their disposition.

Courses for which the researchers had access to the student responses were: EDUC 203 American School Systems (at Rolla; n=7); EDUC 203 American School Systems (at St. Robert; n=9); EDUC 207 Human Growth and Development (at Springfield; n=21); EDUC 207 Human Growth and Development (at St. Robert; n=11); EDUC 302 Educational Psychology (at Cabool; n=15); EDUC 302 Educational Psychology (at St. Robert; n=15); and EDUC 634 Advanced Curriculum and Instruction (at St. Robert; n=6). This information is summarized in the table below.

Table 1 Spring 2005 administration of DEI

Course	Location	Level	n
EDUC 203	Rolla	undergraduate	7
EDUC 203	St. Robert	undergraduate	9
EDUC 207	Springfield	undergraduate	21
EDUC 207	St. Robert	undergraduate	11
EDUC 302	Cabool	undergraduate	15
EDUC 302	St. Robert	undergraduate	15
EDUC 634	St. Robert	graduate	6

Procedures

Following the administration of the DEI the researchers compiled the responses for each student in each course. Possible responses range from 1 to 4, with higher numbers indicating more positive disposition. The DEI is divided into six sections corresponding to the developmental pathways. Each section contains a subset of questions in the following proportions: physical pathway=3 questions; linguistic pathway=4 questions; social pathway=8 questions; psychological pathway=11 questions; ethical pathway=9 questions; and cognitive pathway=8 questions. Each developmental

pathway score is obtained by averaging the scores on the subset questions. Averages were generated for each course in each of the six developmental pathways: physical, linguistic, social, psychological, ethical, and cognitive. The averages for each course are summarized in the table below.

Table 2 Averages for the Developmental Pathways

Course	Location	physical	linguistic	social	psychological	ethical	cognitive
EDUC 203	Rolla	3.52	3.25	3.43	3.35	3.60	3.40
EDUC 203	St. Robert	3.74	3.42	3.32	3.37	3.67	3.42
EDUC 207	Springfield	3.34	3.25	3.32	3.26	3.38	3.28
EDUC 207	St. Robert	3.58	3.27	3.38	3.38	3.63	3.35
EDUC 302	Cabool	3.62	3.40	3.41	3.38	3.67	3.42
EDUC 302	St. Robert	3.64	3.32	3.37	3.38	3.50	3.33
EDUC 634	St. Robert	3.45	3.33	3.49	3.52	3.65	3.57

Using an ANOVA the researchers compared the actual scores for each course in each of the six pathways. The following table summarizes the results of the ANOVA.

Table 3 Results of ANOVA

Pathway	F	probability
Physical	1.919	0.088
Linguistic	0.2462	0.959
Social	0.2468	0.959
Psychological	0.4359	0.853
Ethical	1.340	0.250
Cognitive	0.380	0.890

From the ANOVA it is quite clear that there are no statistically significant differences among the groups. The only pathways to approach the 0.05 threshold of probability were the physical (0.088) and ethical (0.25). This analysis reveals that students' perceptions of their disposition are similar whether the student is a graduate or an undergraduate, or whether the student attends classes on the main campus or one of

the satellite campuses. In this particular study the researchers hoped to find exactly this. The results show that the DEI provides a consistent measure of student disposition.

Intervention strategies

Discussion and collaborative reflection between the preservice teacher and teacher educators can provide a foundation for connecting theory to practice. The DEI used by the faculty at Drury University provides the preservice teacher with authentic experiences in which personal skills and attitudes that support reflective teaching practices and disposition can be developed. The professional exchanges that take place within the context of this relationship can produce opportunities for multiple layers of self-actualization to take place professionally and personally for the preservice teacher.

There are many opportunities for growth that come from using the DEI in a teacher preparation program. The relationship that develops between the preservice teacher and the teacher education program professional can provide a life long influence for the preservice teacher in how they will deal with uncomfortable situations and issues within the teaching profession. The teacher educator can provide invaluable modeling when dealing with possible types of responses from the preservice teacher regarding disposition influenced topics.

One of the most valuable consequences of using the DEI as a part of the preservice teachers' reflective practice is when the preservice teacher experiences cognitive dissonance (Jenson and Kiley, 2000). Sometimes students complete the DEI with their version of "the truth" or their perception of their disposition. In some instances, their version of reality collides with how others perceive who they are. While clashes between perception and reality can be disconcerting, they can also provide an

opportunity for constructive and productive learning experiences. This is especially so when teacher preparation programs provide a safe and supportive environment. A relationship of this kind must be developed between the preservice teacher and teacher education program professional to make the most effective impact on the professional growth and disposition of the preservice teacher.

Cognitive dissonance provides the preservice teacher an opportunity to reflect, analyze and rethink about what they believe and why they respond to specific situations in the manner in which they respond. It provides an opportunity to clarify who they are and what drives certain responses from them in an academic or professional setting (Jenson and Kiley, 2000). When preservice teachers can clearly understand and articulate how their beliefs affect their interactions with others in the professional setting, they can continue their journey in professional growth with a more comprehensive perspective and a more productive framework which will enhance their teaching abilities.

One such experience was described by a Drury University teacher education professor. This professor routinely asked her teacher education students to complete the DEI. The professor kept the forms on file for future use with the same students later in their program on an as needed basis.

In the past, when the DEI was used, each professor had to rely on their own networking resources in order to have the tools needed to guide the student into a deeper self-awareness of their state. As Eric Jenson supports, if a student learns in a particular state, the student will most readily recall his or her learning in that same state. (Jenson, 1998). Our positions as professors can give us great insight into the “state of mind” that our students are experiencing. Preservice teacher education students must be in a positive

motivated “state” to learn and grow professionally, as well as personally. Since the development of the SSST Handbook, professors have access to numerous tools to use when guiding a student into this state of deeper self-awareness. The following summaries are examples of students being mentored by one Drury University teacher education professor after there were significant issues identified within each individual’s state of mind.

Andrea's case

A Drury professor was teaching an educational foundations class with a mixture of adults returning back to school and students beginning their first years of formal university education. Andrea was a student returning back to school after taking time to raise her children. Andrea is a student currently experiencing a lot of stress in regards to her personal life as a single parent of teenagers. She is also in a decision making phase of her life because she is coming to realizations about the life choices and consequences that those choices have had on her individually as well as her family. She has made a decision to come back to school to be able to provide a more secure and satisfying life for her family. Andrea is in a very receptive mode for soaking up knowledge that she has gained from this human growth and development class. The student requested that the professor give her information about resources to help her make some life decisions. The professor took the opportunity to use the SSST Handbook to provide some activities that would help this student reflect upon several past decisions and the consequences that followed. Beginning with the DEI and following with several self-reflection worksheets and activities from the SSST handbook, Andrea was able to promote personal as well as professional growth. This has given the professor many opportunities to listen to Andrea

as she has performed a thorough self-analysis of her past and recent life decisions as they pertain to her future career path. Andrea has been able to come to the conclusion that she needs to take care of herself first before she can care for others in her life. She has been able to come to some basic conclusions about the quality of relationships in her life, and to connect these factors to the type of educator she would be at this time. She is just starting back to school, so she has time to continue the growth process and make progress in the areas that need to be enhanced to make her the most effective educator as well as a more effective parent. Andrea has stated many times, that she wishes she would have had the knowledge that she has gleaned from class and the SSST handbook activities a long time ago. She acknowledges that this reflective information has made her a more proactive and preventive person in her own life situation.

As opposed to a previous case study with a student using the DEI alone, Andrea had a serious deficit in her own self confidence level and was very honest about it on the DEI. The SSST handbook activities made a real contribution to giving her the boost she needed to feel a thread of self-confidence in being the “captain” of her own life.

Using the SSST Handbook will be an ongoing process with Andrea and other students at this time. The handbook will be revised annually to assure that the most effective approaches available are being used with preservice teachers.

Much of the basis of teacher disposition has to do with the five dimensions of emotional literacy (Goleman, 1995) including self-awareness, handling emotions, motivation, empathy, and social skills. It should be the responsibility of teacher education professionals to make sure that future teachers are socially and emotionally competent

themselves, if they are to be able to support and encourage socially and emotional growth in children.

Conclusion

This paper has sought to provide information about Comer's Developmental Pathways theory as it relates to the development and implementation of the DEI at Drury University, address intervention issues, and report on the spring 2005 administration of the DEI.

As the development of the DEI continues and more data becomes available the authors plan to continue the refinement process and begin to incorporate perceptions of student dispositions to teach into all facets of the teacher education program, including utilizing DEI results with regard to admission to the teacher education program, approval to student teach, and recommendation for certification.

The authors further believe that long-term success of the DEI depends heavily upon the continued development of intervention strategies through the SSST handbook. As more students are helped through the SSST handbook analysis of the effectiveness of the intervention strategies can take place with corresponding alterations to the SSST handbook itself.

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