

Investigating student investment curriculum outcomes during a year-long clinical experience

The experiences that teacher candidates (TC) have in their clinical experiences are critical to the success of TCs and teacher education programs. Novice teachers often report that their clinical experiences was a key component in preparing them for their first position (Ralph, Walker, & Wimmer, 2008). Teacher education program characteristics like stringent TC selection, academic preparation, significant clinical experience, and assessment of teaching effectiveness have been called for as foundational components (Schwab, Defranco, & McGivney-Burelle, 2003).

The premise for any clinical experience is that authentic and meaningful learning happens when TCs apply what they have learned in their preparation programs to real problems in the classroom with real students (Ralph et al., 2008). It was in this vein that the student investment project described in this study was developed and implemented. The challenge for teacher education programs is to develop learning experiences that will be applicable in a TC's classroom (Alderman & Beyeler, 2008). This project aimed to help TCs develop planning and implementation skills to address the issues of student motivation, academic reinforcement, the use of role models, creating a welcome environment and mobilizing family members to support students' academic efforts. The importance of these skills is supported by the literature.

Student motivation is linked to students' interest in and enjoyment of school, in academic study, and their level of academic achievement (Martin, 2006). Teachers who develop positive relationships with their students, who are accepting of their students, and support student autonomy facilitate positive engagement in class and greater student motivation (Martin, 2006). When asked to name their role models, students most often mention their family members

(Sanderse, 2013) however, researchers suggest that non-family role models are of critical importance in students social development and academic achievement (Stanton-Salazar & Urson Spina, 2003). The benefits of family involvement in their child's schooling has been demonstrated to support learning and school success from elementary to high school (Carter, 2002). However, encouraging appropriate family involvement can be challenging, TCs need training in promoting effective involvement in their child's academic endeavors (Carter, 2002). Each of the areas addressed by this project and described above are complex, nuanced, and critical for TCs to master. The student investment project was designed to help TCs transfer their knowledge of these concepts to their K-12 classrooms in a concrete and measurable way.

Methods

The purpose of this study was to evaluate the student investment strategies employed by TCs during the final semester of their year-long student teaching experience by reviewing artifacts, interviews and administering questionnaires. Participants in the questionnaires were 40 TCs and 22 mentor teachers from two cohorts. Investment plans were submitted by 31 TCs, while 38 submitted their first student interviews and 22 submitted their second student interviews. A total of 49 TCs and 49 mentor teachers were members of the two cohorts.

As part of their final semester of their year-long student teaching experience, the TCs were concurrently enrolled in a course which focused on curriculum, instruction and classroom management. TCs participated in two two-hour class sessions in which they learned about student investment. These two sessions were based on a well known teaching and leadership framework and rubric. The outcome of the two sessions was an investment plan that TCs would implement into their student-teaching classrooms. The plan consisted of a statement of the big goal, a class-wide tracking system, individual student tracking system, plans for communication

with families, building in time for student reflection, and a plan for revealing the strategy to their students. Prior to the semester's end, questionnaires were administered to both TCs and their mentor teachers that prompted each group to rate and describe the TC's student investment proficiency.

Results

Investment Plans

A co-occurrence network was created to visually display the text used in 31 TC investment plans. In Figure 1, the sizes of nodes in the network were determined by the frequency of the term in the individual item responses. Line thicknesses were determined by the Jaccard similarity coefficient and represent the strength of the association between words.

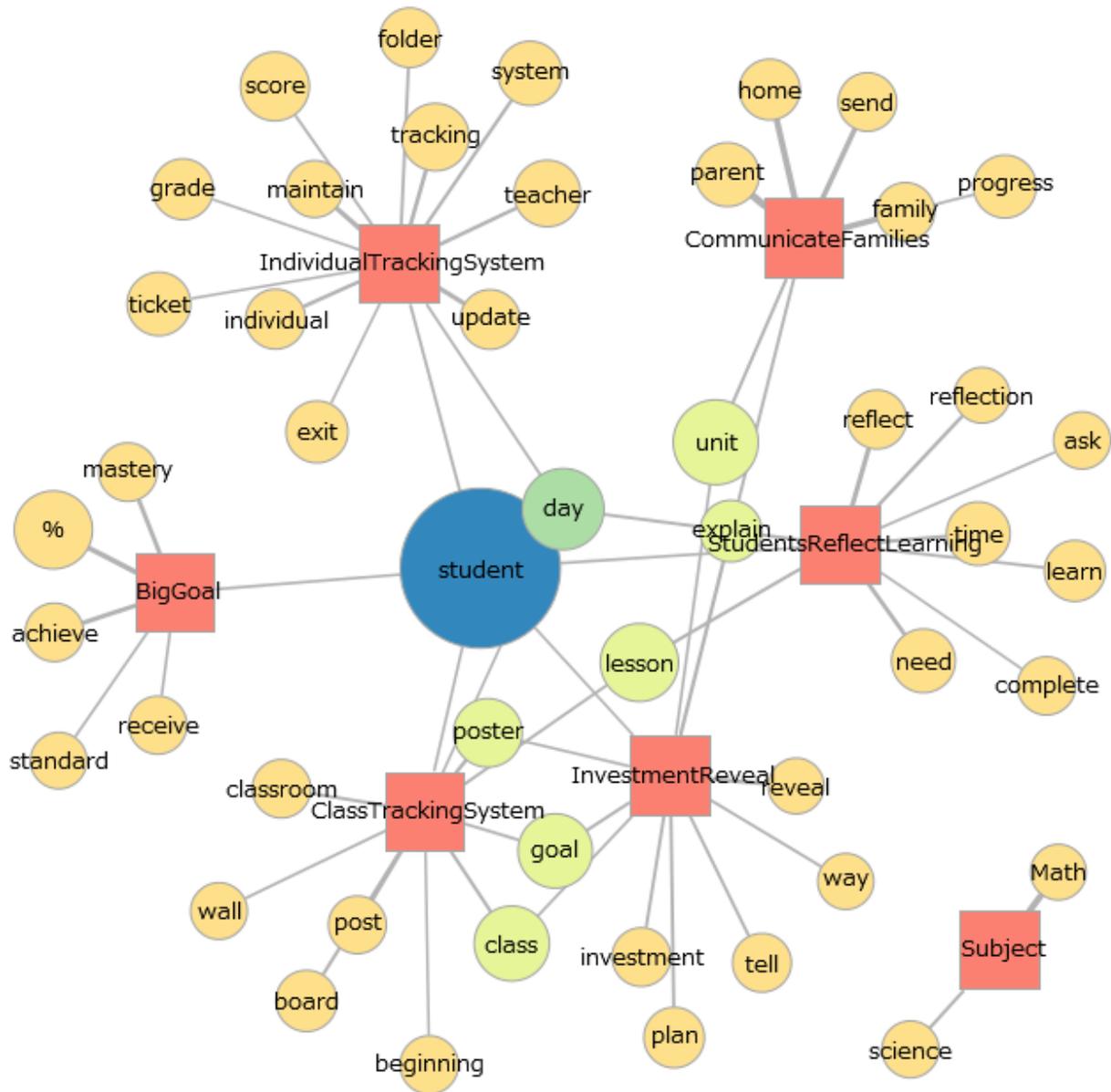


Figure 1. Co-occurrence network for TC investment plan text

The word “student” has strong connections to each of the investment plan template sections except for “Subject”. This suggests that TCs are responding to the student-centered nature of investment and reflecting that understanding in their plans. In defining the big goal for their investment plans, TCs required their students to achieve a certain percentage to demonstrate mastery. While the percentage mastery requirements were specific in most of the big goals,

many of the big goals did not define what students would know or be able to do to demonstrate mastery of the big goal.

The class-wide tracking systems were typically poster-type graphical representations of student progress toward the goal that was displayed prominently in the classroom. The individual tracking systems were maintained either by the teacher or by the individual student. Although the purpose of the investment plan is to enhance students' intrinsic motivation to achieve, there was evidence of extrinsic motivation in some of the plans. Communication with families primarily consisted of sending progress notes or newsletters to parents that included explanations of what students were learning. TCs recognized that students needed time to reflect on their learning regularly, but they provided limited strategies to allow students to do so.

Student Interviews

Co-occurrence networks were created to visually display the transcribed interviews from before the investment plan was created and at the end of the semester (Figures 2 and 3).

Figure 3. Co-occurrence network for end of semester student interviews

End of the semester interviews. Most students responded that they felt they could be successful in the class if they tried hard and wanted to be successful. Success to the students at the end of the semester looked like good grades and hard work. Students said they were motivated because learning was fun and they wanted to earn good grades. When asked about a role model that encouraged hard work in school, students cited their teachers and family members as role models. They also said that their teachers were helpful when encouraging them to work hard. Students said they feel comfortable in class and mentioned that their teachers made them feel comfortable. Most students also said that they were comfortable asking questions and asking for help because they know that their teachers would help them.

Investment Strategy Survey

Most (80%) TCs responded that they had advanced or exemplary proficiency in using appropriate role models who work hard, value academic achievement, and that their students identify with (n = 40), while 41% of mentor teachers responded that their TC had had advanced or exemplary proficiency in the same skills (n = 22). Most (78%) TCs responded that they had advanced or exemplary proficiency in reinforcing academic efforts toward big goals (n = 40), while 64 % of mentor teachers responded that their TC had had advanced or exemplary proficiency in the same skills (n = 22). Less than half (48%) of TCs responded that they had advanced or exemplary proficiency in mobilizing students' influencers to actively invest in students' work toward big goals (n = 40), while 32% of mentor teachers responded that their TC had had advanced or exemplary proficiency in the same skills (n = 22).

Although TCs rated themselves higher on each five-point item than did mentor teachers, there were no significant differences between the mean scores from TCs and mentor teachers.

The results of the Welch ANOVA are in Table 1.

Table 1
Teacher Candidate Mentor Teacher Item Mean Difference

	TC Mean	MT Mean	Welch <i>F</i>	DF	<i>p</i>
Achievement by working hard	3.95	3.77	0.88	1, 37.77	0.36
Benefit from achievement	3.93	3.77	0.64	1, 38.62	0.43
Employ role models	4.03	3.41	3.95	1, 37.88	0.05
Reinforce academic efforts	3.95	3.73	1.26	1, 40.80	0.27
Create a welcome environment	4.38	4.32	0.09	1, 34.27	0.77
Mobilize student influencers	3.48	3.14	1.81	1, 44.16	0.19

Investment Strategy Examples

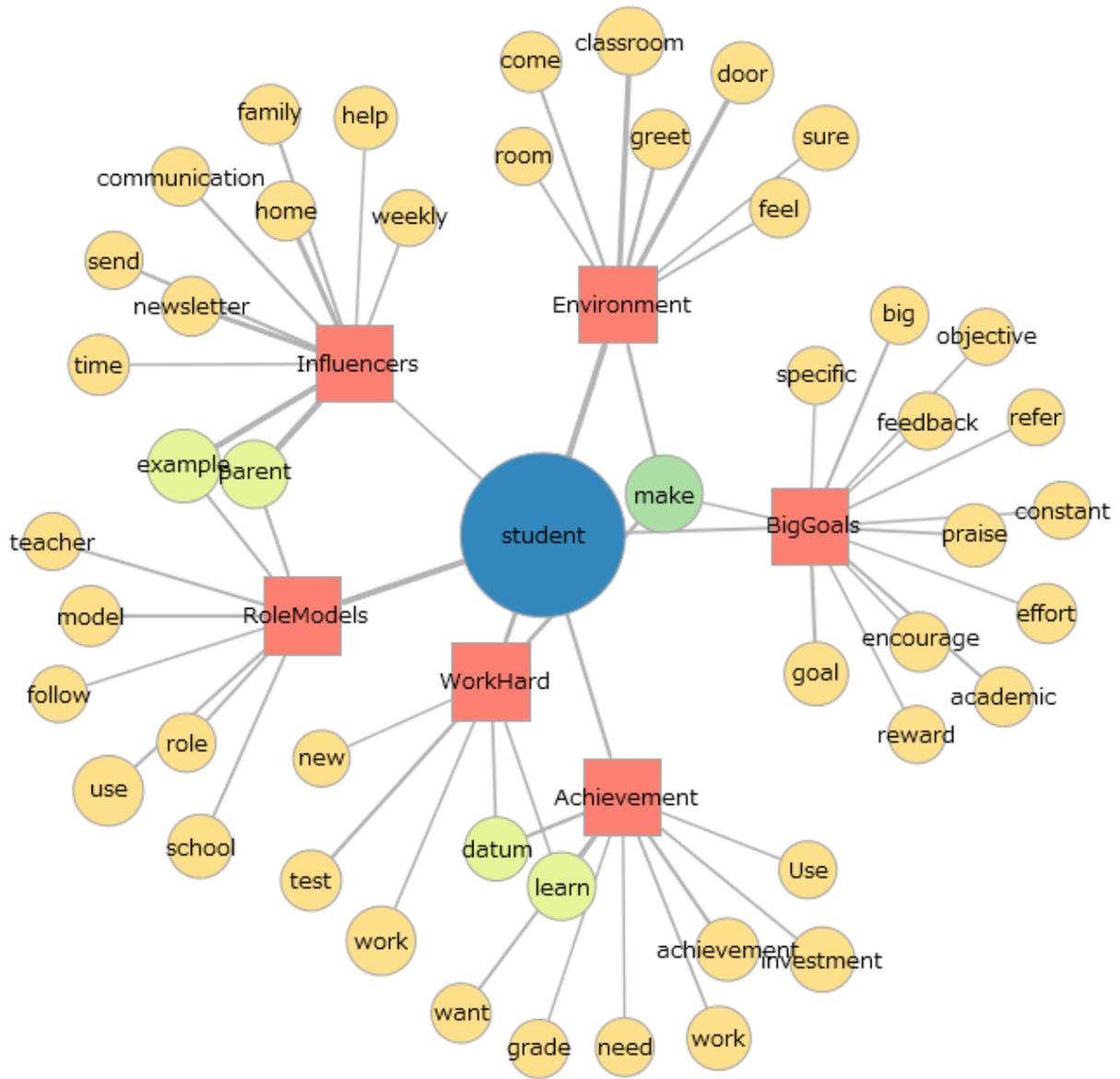


Figure 4. Co-occurrence network for TC open-end responses

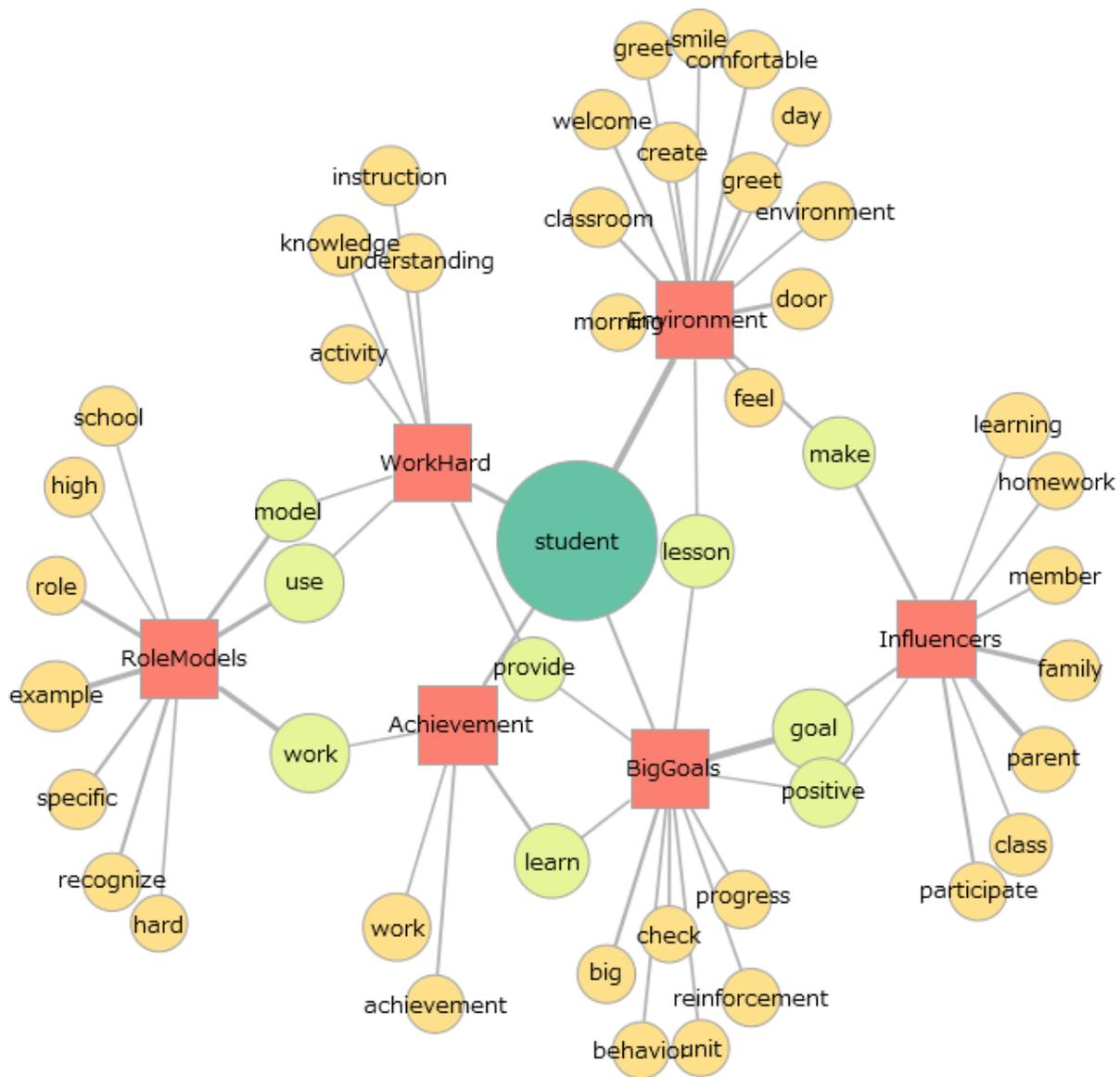


Figure 5. Co-occurrence network for mentor teacher open-end responses

In both Figure 4 and 5, the word student is the center of the network and has strong connections to the investment categories. This reflects the student-centered nature of investment as well as the TC's understanding that investment is student-centered. In Figure 4, the co-occurrence network suggests that TCs use data, tests, and learning to develop the connection between achievement and working hard and to demonstrate that their students will benefit from achievement. TCs use parents and examples of other appropriate role models to follow while

they encourage, reward, and praise effort while providing feedback to reinforce academic efforts. TCs greet their students at the door to make sure they feel welcome in their classroom. TCs send newsletters and other communication to parents and family on a regular basis to mobilize student influencers.

In Figure 5, the co-occurrence network suggests that mentor teachers said their teacher TCs use instruction and activities to develop the connection between achievement and working hard. Mentor teachers said their TCs use specific examples for role models in their teaching and said their TCs check on student progress and reinforce behavior to reinforce academic efforts. Mentor teachers said their TCs create a comfortable environment and greet their students at the door and use family members and parents to help students work toward big goals.

Discussion

The purpose of this study was to evaluate the student investment strategies employed by TCs during the final semester of their year-long student teaching experience. The results of the evaluation of TC artifacts, student interviews and surveys suggests that the investment project shows promise in transferring some TC skills from their teacher education program to their classroom, but may need revision to address other skills more effectively. TC investment plans revealed that they focused on their students and mastery learning, but relied on extrinsic motivational strategies and did not implement student reflection strategies effectively. The student interviews revealed that the TC's developed healthy relationships with their students and created a welcoming classroom. Although TCs were very confident in their student investment proficiency, their mentor teachers were less so. The mentor survey results suggest that strategies in employing role models and mobilizing student influencers should be revisited in the student investment curriculum.

Though the results of this study are preliminary and on a relatively small portion of the hundreds of TCs in their clinical experience, the project shows promise. This project was an example of an attempt to transfer learning from the teacher education program to actionable and measurable behaviors in the classroom. Calls for this type of learning transfer have been made by educational organizations seeking to improve teacher education by focusing on how to implement theory into the K-12 classroom, rather than simply studying the theory in the teacher education program. This project can serve as a model of a starting point for delivering instruction on student investment that is enacted in the K-12 classroom.

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