

Intrinsic Outcomes for Future Teachers

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This quantitative study seeks to explore intrinsic motivation amongst students in post-secondary education. The sample includes 55 undergraduate students currently enrolled in a college of education teaching methods course. The researchers sought to explore the correlation between intrinsic motivation and key variables such as academic achievement, persistence and engagement. To measure the correlation, participants were given portions of The Motivated Strategies for Learning Questionnaire (MSLQ). Pearson's correlation coefficient was utilized to analyze the questionnaire data, measuring the extent to which intrinsic motivation was related to postsecondary academic performance, persistence, and engagement. The results indicate that undergraduate students' engagement with cognitive learning strategies are influenced more by intrinsic motivation, with evidence of the impact of motivation toward student efforts in learning activities. The results of the study inform college professors in undergraduate programs regarding motivation and task completion in post-secondary education courses.

Keywords: post-secondary education, motivation, teacher education

Intrinsic Outcomes for Future Teachers

Introduction

This study examines the impact of cognitive learning strategies and self-regulation on students' intrinsic motivation, which plays a crucial role in academic success. As college enrollment continues to rise, it is essential to explore ways to enhance students' chances of success in higher education. According to the latest data from the National Center for Education Statistics (NCES, 2023), undergraduate enrollment increased from 13,715,610 in 2001 to 17,036,778 in 2015. With the cost of college education steadily increasing, many parents and students face significant financial burdens. The rising expenses make it crucial to ensure that students not only enroll in college but also succeed academically. One potential solution is fostering cognitive learning strategies and self-regulation skills. These strategies can help students become independent learners, manage time better, and stay focused. By teaching students how to regulate their learning processes and use cognitive learning strategies, educators and parents can significantly boost students' intrinsic motivation, leading to greater academic performance and, ultimately, success.

Motivation is a driving force behind why students choose to engage in certain behaviors, such as attending post-secondary education, and plays a crucial role in determining academic success (Deci & Ryan, 1985). Cognitive learning strategies and self-regulation are also essential to student success. These strategies include rehearsal, elaboration, organization, critical thinking, and metacognitive self-regulation. According to Dweck and Elliot (1983), cognitive engagement is a predictor of motivation, where students' active use of cognitive strategies leads to increased engagement and success. Richardson and Newby (2010), similarly state that cognitive engagement includes the strategies students apply to complete tasks, emphasizing that the depth of cognitive

effort correlates with academic success. Craik and Lockhart (1972) found that the depth at which information is processed (through elaboration) directly affects memory retention. Zimmerman (2001) found that metacognitive self-regulation is important to academic success. Students who actively manage their own learning through self-monitoring, goal-setting, and self-reflection are more likely to be motivated and academically successful.

A student's decision to continue post-secondary education and their chances of success are greatly influenced by their motivation, which is defined as the desire to accomplish a goal (Kane, 2015; Zhang, 2007). According to Zhang and Kemp (2009), there are two sorts of motivation: extrinsic motivation is fueled by outside rewards like money, but intrinsic motivation is motivated by personal fulfillment and a love of learning. Studies show that students who make financial investments in their education are more likely to be intrinsically motivated, which is linked to improved academic achievement and a higher ability to manage student loan debt after graduation (Kane, 2015).

To improve student motivation and academic achievement, cognitive learning techniques such as self-regulation, organization, rehearsal, elaboration, and critical thinking are crucial (Dweck & Elliot, 1983). In this process, cognitive engagement which is characterized by the methods students use to finish assignments is crucial (Richardson & Newby, 2010). According to Atkinson and Shiffrin (1971), the depth of cognitive processing can improve memory retention. Self-regulated learning is also essential for inspiring students to take charge of their education, which will improve their performance (Zimmerman, 2001). In the end, motivation is a combination of extrinsic and intrinsic elements, and students' academic performance and long-term success can be greatly impacted by the use of efficient cognitive techniques.

Literature Review and Theoretical Perspectives

Motivation

Motivation, quite simply, is the desire to complete a task. Motivation can be explained as why a student chooses to attend a post-secondary institution and has been viewed as a key factor in determining a college student's success (Kane, 2015; Zhang, 2007). In an educational setting, motivation can be broken into intrinsic motivation and extrinsic motivation (Zhang & Kemp, 2009). Intrinsic motivation is defined as completing an action absent of any reward and extrinsic motivation is the completion of an action for outside motivation such as a reward (Deci & Ryan, 1985). This would be the difference in a student completing a degree for the love of learning or for the promise of future financial benefits (Zhang & Kemp, 2009). Kane (2015) also found that students are more intrinsically motivated if they financially contribute to their post-secondary education.

Motivation applies to student debt repayment, as students who are able to complete their degree are more likely to have the financial means to be able to pay back any debt accrued during their time in school. Post-secondary education is viewed as a worthy investment if it allows the graduate to obtain a job in their field (Kane, 2015). Students who do not complete a degree are less likely to be able to pay back student debt as they are unable to enter the labor market at the level of graduates (Baum, 2017; Weinstein & Goodman, 2021). Furthermore, those students reporting higher levels of intrinsic motivation perform better academically, and students with higher debt levels reported more extrinsic motivation (Zhang & Kemp, 2009).

Cognitive learning strategies

Cognitive learning strategies are important to student success. Dweck and Elliot (1983) suggest that cognitive engagement is also a predictor of motivation. Cognitive engagement

includes strategies that students utilize to complete a task (Richardson & Newby, 2010). This study looks at the relationship between the use of cognitive learning strategies (organization, rehearsal, elaboration, critical thinking, self-regulation and task value) and its relationship to task value, which for this study is academic success.

Organization

Transferring information from the short-term to the long-term memory is done through the process of organization. Information can be retained for longer if it is organized in short-term memory before being moved to long-term memory (Atkinson & Shiffrin, 1971). Organizing information is essential for effective learning and requires information to be efficiently arranged because it facilitates the transfer of information from short-term to long-term memory, improving retrieval and retention.

Rehearsal

Rehearsal, an explicit repetition of information and can be used in many different situations (Atkinson & Shiffrin, 1971). Once information is in long-term memory, it can be recalled through retrieval (Atkinson & Shiffrin, 1968). The Atkinson and Shiffrin multi-store model of rehearsal serves as the main mechanism for transferring information from the short-term memory store to the long-term memory store (Atkinson & Shiffrin, 1968). Rehearsal is crucial for efficient learning and application in a variety of scenarios since it helps with information storage and improves recall of information in the future.

Elaboration

Craik and Lockhart (1972) established the levels-of-processing hypothesis, which is called information processing. This approach suggests that individuals use varying degrees of elaboration to discover meaning in the information they process through labeling and attention. Furthermore, all processed data can be recovered, which improves a person's memory for

previously stored knowledge (Craik & Lockhart, 1972). A person can utilize elaboration as a learning approach to better understand information by summarizing or paraphrasing it. Because it stores information in the long-term memory, it is regarded as a higher-order learning approach (Weinstein & Mayer, 1986). Deeper engagement facilitates better understanding and promotes the transfer of knowledge to long-term memory, reinforcing the idea that the depth of processing is crucial for effective learning outcomes.

Critical Thinking

Critical thinking is defined as a student's capacity to solve problems, come to conclusions, or form critical assessments in relation to standards of excellence by applying prior knowledge to various contexts (McKeachie, et al., 1990; Pintrich, et al., 1991). According to Nickerson, Perkins, and Smith (1985), critical thinking is crucial for the application and transfer of knowledge for problem solving and application in novel circumstances. Critical thinking is important for success in school. It helps students analyze information, tackle difficult problems, and make well-informed decisions. This skill enables them to use what they know in new and challenging situations.

Metacognitive Self-regulation

Students need self-regulation to become more academically successful (Zimmerman, 2001). Self-regulated learning is defined as the thoughts, actions, and feelings that are used to achieve a certain goal (Schunk & Zimmerman, 1994). Students' motivation is correlated with their capacity for self-control and active engagement in their own education (Duncan & McKeachie, 2005). Thus, motivation might change based on the task that needs to be accomplished. Teachers can help students succeed academically in post-secondary education by emphasizing motivation, metacognitive self-regulation, and cognitive learning skills. Self-

regulation is essential for doing well in school. It allows students to take charge of their learning. This means they can set goals, manage their time well, and adjust their approach for different tasks. As a result, their motivation and involvement in their education improve.

Task Value

Task value is the student's assessment of a task's significance, appeal, and usefulness (Pintrich, et al., 1991). According to Wigfield and Eccles' (1992) expectation value theory, an activity's "task value" is determined by the student. Additionally, they discovered that students are more likely to complete an assignment if they believe it to be worthwhile. Task-value is a crucial factor in evaluating a student's performance in the classroom since it establishes the task's significance for the individual (Wigfield & Eccles, 2000). Task value is important because it directly influences a student's motivation and willingness to engage with assignments, as students are more likely to invest effort and achieve better outcomes when they perceive a task as meaningful and relevant to their personal goals.

Motivation plays a significant role in shaping students' educational outcomes, with intrinsic motivation generally leading to better academic performance. Students motivated by love for learning or personal growth are more engaged, self-regulated, and capable of applying critical thinking to solve problems (Dweck & Elliot, 1983). Conversely, students who are extrinsically motivated may experience stress or dissatisfaction, especially if they are motivated primarily by financial concerns or societal pressure (Zhang & Kemp, 2009). Cognitive learning strategies act as tools that facilitate the transfer of knowledge into long-term memory, enhance critical thinking, task value, and promote self-regulated learning, all contributing to academic achievement. Motivation in the academic setting is a complex interplay of intrinsic and extrinsic factors. The use of cognitive learning strategies and self-regulation enhances intrinsic

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

motivation, which, in turn, leads to better academic performance and greater financial success.

Understanding the theoretical foundation of motivation helps educators design interventions that foster a deeper, more sustainable motivation in students, contributing to their long-term success.

Looking at the correlation between students' intrinsic motivation and their cognitive learning strategies, the researchers developed two research questions:

1. Does intrinsic motivation increase students' use of cognitive learning strategies among students enrolled in the College of Education? (Organization, Rehearsal, Elaboration, Critical thinking).
2. Does intrinsic motivation increase metacognitive self-regulation among students enrolled in the College of Education?

Methods

Participants

Participants were recruited from the undergraduate student population of the College of Education at a public southeastern university, which has roughly 12,000 undergraduate students. Enrollment in the College of Education occurs during the last semester of a students' sophomore year. Therefore, many of the participating students were in their junior or senior year of college. The participants must be enrolled as undergraduate students within the college and be at least 19 years of age at the time of recruitment. Participants must be over the age of 19 to participate because in the state the study was conducted students are not considered adults until 19 years of age. Exclusion criteria was not applied in this study. Fifty-five participants were eligible to participate in this study sample. Participants' age range varied, with a majority falling in the age bracket of 19-24. All participants were given an informed consent form before their involvement in the study.

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Participants were recruited utilizing convenience sampling from the university where the researcher is affiliated due to the logistical constraints and the accessibility of participants. Leveraging existing relationships and access to these courses, the researcher targeted undergraduate classes within the university's College of Education. During a scheduled class session, the researcher introduced the study to students, highlighting its significance and inviting them to participate. Participants were assured of the confidentiality and anonymity of their responses. The researchers were not the instructors for the course.

Data collection

Data collection began with the dissemination of an email inviting all eligible participants to participate in the study. The email contained detailed information about the study's objectives, procedures, and a link to the survey instrument. Additionally, to enhance the response rate of participants, a verbal reminder was provided by the research during visits to undergraduate courses within the college. A reminder served to reinforce the invitation extended via email and provided students with another opportunity to engage with the study. Participants were assured of the confidentiality and anonymity of their responses, and informed consent was obtained from each participant before completing the survey.

Instrumentation

The Motivated Strategies for Learning Questionnaire (MSLQ) is designed using a social cognitive view of motivation (Pintrich, et al., 1991). This survey finds that students' motivation is linked to their ability to utilize cognitive and metacognitive self-regulation. By leveraging these strategies, students learn to self-regulate their behavior to assist them in achieving a goal. Student financial contributions are predictive of greater intrinsic motivation toward their education (Kane et al., 2016). This study uses the subscales of the MSLQ to investigate how

intrinsic motivation was related to other factors related to being a successful student among students who contributed at least some of their financial resources.

The MSLQ is widely regarded as a valid and reliable tool for assessing motivational and cognitive strategies utilized by students in education settings. Its validity is evidenced by extensive research showing its ability to measure student motivation and learning strategies. This study only used a portion of the MSLQ: intrinsic motivation, extrinsic motivation, rehearsal, elaboration, organizational and critical thinking, self-regulation, and task value. The MSLQ's Cronbach's alpha coefficients typically exceeded 0.70 for most subscales, indicating that items within each subscale consistently measure the same underlying construct establishing criterion-related validity (Pintrich & de Groot, 1990, p. 35).

Research design

Researchers utilized survey research methodology, specifically implementing portions of the Motivated Strategies for Learning Questionnaire (MSLQ). Participants were administered the MSLQ, a widely recognized self-report instrument designed to measure students' motivational orientations and learning strategies. Within the framework of a correlational research approach, we focused on exploring the relationship between intrinsic motivation and other factors associated with student success, such as academic achievement, persistence, and engagement. By examining the correlations between intrinsic motivation and these key variables, we aimed to elucidate the extent to which students' internal drive and interest in learning are linked to their overall academic performance and behaviors indicative of success in the educational context.

Analysis

In this study, Pearson's correlation coefficient was employed to analyze the data and investigate relationships between key variables of interest. Pearson's correlation coefficient,

denoted as r , allowed us to quantify the strength and direction of the linear relationship between pairs of continuous variables. By calculating Pearson's r , we determined the degree to which changes in one variable were associated with changes in another. Specifically, we used Pearson's correlation coefficient to examine the correlation between intrinsic motivation and key variables such as academic achievement, persistence, and engagement. This statistical measure enabled us to explore the extent to which intrinsic motivation was related to academic performance, the likelihood of students persisting in their educational pursuits, and their level of engagement in learning activities. Through the application of Pearson's correlation coefficient, we gained valuable insights into the interplay between intrinsic motivation and these crucial factors in the academic context, contributing to a deeper understanding of the motivational processes underlying student success.

Bias

Conducting a survey presents the risk of encountering both non-response bias and response bias, which can compromise the validity and reliability of the study's findings. Non-response bias occurs when individuals who choose not to participate in the survey differ systematically from those who do participate, leading to a skewed representation of the target population. Factors such as survey fatigue, lack of interest, or demographic characteristics may contribute to non-response bias, as certain groups may be more likely to participate.

The response bias can arise when respondents provide inaccurate or socially desirable responses, leading to misrepresentation of their true attitudes, beliefs, or behaviors. Response bias may stem from factors such as social desirability bias, where participants provide responses, they perceive as socially acceptable, or acquiescence bias, where respondents tend to agree with statements regardless of their true beliefs. Recognizing the potential for non-response bias and

response bias is essential for implementing strategies to mitigate these biases and enhance the validity of survey results.

In our study, we implemented several measures to mitigate potential sources of bias in survey responses. Firstly, we ensured anonymity and confidentiality by informing participants that their responses would be kept strictly confidential and would not be linked to their identities. This assurance encouraged respondents to provide honest and accurate responses without fear of repercussion, thereby reducing the likelihood of social desirability bias. Additionally, we utilized clear and unbiased language in constructing survey questions to minimize response bias. Survey items were carefully crafted to avoid leading or loaded language that could inadvertently influence respondents' answers. Pilot testing was conducted to assess the clarity and comprehensibility of survey questions, and revisions were made based on feedback to ensure that questions were easily understood by participants from diverse backgrounds. By prioritizing anonymity, confidentiality, and the use of clear and unbiased language, we aimed to foster an environment conducive to obtaining reliable and valid survey data, thereby enhancing the quality and integrity of our research findings.

Results

Pearson's correlations were calculated to identify relationships between intrinsic motivation, extrinsic motivation, rehearsal, elaboration, organizational and critical thinking, self-regulation, and task value. We found that as intrinsic motivation increased, individuals placed greater value on the task they were completing (i.e. their education), reported higher levels of self-regulation maintenance, greater organization and critical thinking in their studies, and reported using elaborative rehearsal significantly more than those lower in intrinsic motivation, $r(65) = .64, p < .001$, $r(66) = .41, p < .01$, $r(66) = .47, p < .001$, and $r(66) = .63, p < .001$, respectively. Indeed, nearly 40% of the variance in elaborative rehearsal was found to be related

to intrinsic motivation ($r^2 = .397$). A similar pattern was found for extrinsic motivation, but the correlations were weaker in all cases. Thus, we found that increasing intrinsic motivation among students is particularly valuable for increasing other factors that are known to predict student success. Therefore, having students contribute to their post-secondary education would increase students' intrinsic motivation and their potential academic success.

Discussion and Conclusion

The results of this study provide significant insights into the relationship between intrinsic motivation and various cognitive learning strategies, as well as their collective impact on academic success. By using Pearson's correlation coefficient, the findings suggest a robust positive relationship between intrinsic motivation and these factors, underscoring the pivotal role that intrinsic motivation plays in fostering academic success.

The survey data revealed that as intrinsic motivation increased, students reported placing greater value on their education and exhibited higher levels of self-regulation, organization, and critical thinking. Additionally, students who were intrinsically motivated were significantly more likely to engage in elaborative rehearsal, a cognitive strategy that enhances the depth of learning and retention of material. Notably, intrinsic motivation explained nearly 40% of the variance in elaborative rehearsal ($r^2 = .397$), indicating a strong connection between the two variables. These findings align with previous research suggesting that intrinsic motivation encourages deeper engagement with learning materials, which, in turn, improves academic outcomes (Deci & Ryan, 1985; Zhang & Kemp, 2009).

Interestingly, while extrinsic motivation also exhibited positive correlations with the same cognitive strategies, the relationships were notably weaker. This suggests that while extrinsic motivators, such as financial rewards or societal expectations, may encourage students

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

to adopt certain learning strategies, the effect is less pronounced compared to the impact of intrinsic motivation. These results are consistent with the difference between intrinsic and extrinsic motivation, where the former is more closely associated with sustained engagement and higher-order thinking (Deci & Ryan, 1985). Students who are motivated by intrinsic factors are more likely to engage in self-directed learning and to persist in their educational pursuits.

The implications of these findings are particularly relevant in the context of higher education. Given that intrinsic motivation is strongly linked to better organizational skills, critical thinking, and the use of advanced cognitive strategies, it is crucial for educators and institutions to find ways to develop intrinsic motivation in students. One approach, as suggested by Kane (2015), involves having students financially contribute to their post-secondary education, which has been shown to enhance intrinsic motivation. By investing in their education, students may develop a greater sense of ownership and responsibility for their learning, leading to increased engagement and academic success.

Moreover, fostering intrinsic motivation could be beneficial for students facing high levels of student debt. Kane (2015) suggest that students who are intrinsically motivated when they financially contribute to their post-secondary education. Therefore, they are more likely to persist in their educational endeavors and be more academically successful. This could ultimately improve their ability to repay student loans, as degree completion is associated with better job prospects and earning potential (Baum, 2017; Weinstein & Goodman, 2021).

The small sample size used in this study undeniably limits the overall scope of the findings, as it restricts the ability to generalize the results to a broader population. However, despite this limitation, the findings do align with and confirm previous studies that were cited. The study's focus on students in the College of Education during their final three years further

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

narrows the potential range of applicability. If the entire student population of the university had been included, a more comprehensive and diverse set of data could have been obtained, allowing for greater generalization of the findings across different disciplines and academic levels.

Expanding the participant pool in future research could offer a more robust understanding of the relationships under investigation.

In conclusion, the study highlights the critical role that intrinsic motivation plays in promoting cognitive engagement and academic success. The strong associations between intrinsic motivation and key cognitive strategies such as elaborative rehearsal, organization, and critical thinking suggest that fostering intrinsic motivation can significantly enhance students' learning experiences and outcomes. While extrinsic motivation also contributes to academic performance, its impact is weaker, emphasizing the importance of cultivating intrinsic motivation in educational settings. Future research could further explore the specific interventions that would increase student intrinsic motivation and the long-term effects on student success.

Tables and Figures

Below is the table for the Pearson's correlations were calculated to identify relationships between intrinsic motivation, extrinsic motivation, rehearsal, elaboration, rehearsal, organizational and critical thinking, self-regulation, and task value.

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Correlations

		IntMotiv	ExtMotiv	TaskValue	Rehearsal	Elaboration	SelfReg	OCT
IntMotiv	Pearson Correlation	1	.051	.640**	.229	.626**	.407**	.472**
	Sig. (2-tailed)		.685	<.001	.064	<.001	<.001	<.001
	N	66	65	65	66	66	66	66
ExtMotiv	Pearson Correlation	.051	1	.291*	.228	.273*	.377**	.349**
	Sig. (2-tailed)	.685		.019	.067	.028	.002	.004
	N	65	65	65	65	65	65	65
TaskValue	Pearson Correlation	.640**	.291*	1	.113	.603**	.480**	.510**
	Sig. (2-tailed)	<.001	.019		.369	<.001	<.001	<.001
	N	65	65	65	65	65	65	65
Rehearsal	Pearson Correlation	.229	.228	.113	1	.502**	.396**	.465**
	Sig. (2-tailed)	.064	.067	.369		<.001	<.001	<.001
	N	66	65	65	66	66	66	66
Elaboration	Pearson Correlation	.626**	.273*	.603**	.502**	1	.672**	.806**
	Sig. (2-tailed)	<.001	.028	<.001	<.001		<.001	<.001
	N	66	65	65	66	66	66	66
SelfReg	Pearson Correlation	.407**	.377**	.480**	.396**	.672**	1	.817**
	Sig. (2-tailed)	<.001	.002	<.001	<.001	<.001		<.001
	N	66	65	65	66	66	66	66
OCT	Pearson Correlation	.472**	.349**	.510**	.465**	.806**	.817**	1
	Sig. (2-tailed)	<.001	.004	<.001	<.001	<.001	<.001	
	N	66	65	65	66	66	66	66

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

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Appendices

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Q9 Answer the following statements based on your preferences with 1 being not true and 7 being very true

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

	Not true (1)	Click to write Scale Point 2 (2)	Click to write Scale Point 3 (3)	Click to write Scale Point 4 (4)	Click to write Scale Point 5 (5)	Click to write Scale Point 6 (6)	Very true (7)
In class, I prefer course material that really challenges me, so I can learn new things (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In class, I prefer course material that arouses my curiosity, even if it is difficult to learn (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The most satisfying thing for me in a course is trying to understand the content as thoroughly as possible. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I have the opportunity, I choose course assignments that I can learn from even if they don't guarantee a good grade (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Getting a good grade in a class is the most satisfying thing for me right now (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

The most important thing for me right now is improving my overall grade point average, so my main concern this semester is getting good grades (6)

If I can, I want to get better grades this semester than most of the other students (7)

I want to do well this semester because it is important to show my ability to my family, friends, employer, or others. (8)

I think I will be able to use what I learn in the course in other courses (9)

It is important for me to learn the course material in my program (10)

I am very interested in the content areas of my program. (11)

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

I think the course material in my program is useful for me to learn (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I like the subject matter of my program. (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Understanding the subject matter of my program is very important to me. (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

End of Block: Intrinsic Goal Orientation Extrinsic and task value

Start of Block: Rehearsal

Q11 Answer the following statements based on your preferences with 1 being not true and 7 being very true

	Click to write Scale Point 1 (1)	Click to write Scale Point 2 (2)	Click to write Scale Point 3 (3)
When I study for this class, I practice saying the material to myself over and over (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When studying for this course, I read my notes and the course readings over and over. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I memorize keywords to remind me of important concepts in this class. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make list of important terms for this course and memorize the list. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

End of Block: Rehearsal

Start of Block: Elaboration

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Q12 Answer the following statements based on your preferences with 1 being not true and 7 being very true

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

	Not True (1)	Click to write Scale Point 2 (2)	Click to write Scale Point 3 (3)	Click to write Scale Point 4 (4)	Click to write Scale Point 5 (5)	Click to write Scale Point 6 (6)	Very True (7)
When I study for this class, I pull together information from different sources, such as lectures, readings, and discussions. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I try to relate ideas in this subject to those in to other courses whenever possible. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When reading for this class, I try to relate the material to what I already know. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I study for this course, I write brief summaries of the main ideas from the readings and the concepts for the lectures. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

I try to understand the material in the class by making connections between the readings and the concepts for the lectures. (5)

I try to apply ideas from course readings in other class activities such as lectures and discussion. (6)

Click to write Statement 7 (7)

End of Block: Elaboration

Start of Block: Organization and Critical Thinking

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Q13 Answer the following statements based on your preferences with 1 being not true and 7 being very true

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

	Not True (1)	Click to write Scale Point 2 (2)	Click to write Scale Point 3 (3)	Click to write Scale Point 4 (4)	Click to write Scale Point 5 (5)	Click to write Scale Point 6 (6)	Very True (7)
When I study the readings for this course, I outline the material to help me organize my thoughts. (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I study for this course, I go through the readings and my class notes and try to find the most important ideas. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I make simple charts, diagrams, or tables to help me organize course material. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I study for this course, I go over my class notes and make an outline of important concept. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I often find myself questioning things I hear or read in this course to decide if I find them convincing. (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

When a theory, interpretation, or conclusion is presented in class or in the readings, try to decide if there is good supporting evidence. (6)

I treat the course material as a starting point and try to develop my own ideas about it. (7)

I try to play around with ideas of my own related to what I am learning in this course. (8)

Whenever I read or hear an assertion or conclusion in this class, I think about possible alternatives. (9)

End of Block: Organization and Critical Thinking

Start of Block: Self Regulation

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Q14 Answer the following statements based on your preferences with 1 being not true and 7 being very true

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

	Not True (1)	Click to write Scale Point 2 (2)	Click to write Scale Point 3 (3)	Click to write Scale Point 4 (4)	Click to write Scale Point 5 (5)	Click to write Scale Point 6 (6)	Very True (7)
During class time I often miss important point because I'm thinking of other things (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When reading for this course, I make up questions to help focus my reading. (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
When I become confused about something I'm reading for this class, I go back and try to figure it out. (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
If course materials are difficult to understand, I change the way I read material. (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Before I study new course material thoroughly, I often skim it to see how it is organized.
(5)

I ask myself questions to make sure I understand the material I have been studying for this class.
(6)

I often find that I have been reading for class but don't know what it was all about.
(7)

I try to think through a topic and decide what I am supposed to learn from it rather than just reading it over when studying.
(8)

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

When studying for this course I try to determine which concepts I don't understand well. (9)

When I study for this class, I set goals for myself in order to direct my activities I each study period. (10)

If I get confused taking notes in class, I make sure I sort it out afterwards. (11)

End of Block: Self Regulation

Start of Block: Demographics

Q2 Are you 19 years old or older?

Yes (1)

No (2)

Skip To: End of Survey If Are you 19 years old or older? = No

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Q3 Ethnicity - Please select all that apply

- African American (1)
 - Asian or Pacific Islander (2)
 - Hispanic or Latino (3)
 - Native American or Alaskan Native (4)
 - White or Caucasian (5)
 - Other (6)
-







Q4 Estimate how much money your parents make, collectively

- 0-\$8,925 (1)
 - \$8,926- \$36,250 (2)
 - \$36,251- \$87,850 (3)
 - \$183,251-\$398,350 (4)
 - \$398, 351 + (5)
-

Q5 List the percentages that each of the following contributed to your tuition. This must total 100%

0 10 20 30 40 50 60 70 80 90 100

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Parents/family ()	
Loans ()	
Scholarship ()	
Personal Savings ()	
Full or part-time summer job ()	
Full or part-time job during the school year ()	

Q6 What is your classification?

- Freshman (1)
- Sophomore (2)
- Junior (3)
- Senior (4)

Q7 What is your current cumulative GPA?

- 0-1 (1)
- 1.1-2.0 (2)
- 2.0-2.9 (3)
- 3.0-3.9 (4)
- 4.0 (5)

INTRINSIC OUTCOMES FOR FUTURE TEACHERS

Q15 What college are you currently enrolled?

- Undeclared (1)
- College of Arts and Sciences (2)
- College of Communication and Fine arts (3)
- College of Education (4)
- College of Health and Human Services (5)
- College of Business (6)

End of Block: Demographics
