CENTER ON EDUCATION POLICY CEP

## Appendix: How Do Different Experts View the Dimensions of Student Motivation?

| Researchers | Major theories of researcher | Dimensions of motivation | | | |
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| | | ***Competence***<br>*The students believes he or she has the ability to complete the task* | ***Control/autonomy***<br>*The student feels in control by seeing a direct link between his or her actions and an outcome, and retains autonomy having some choice about whether or how to undertake the task* | ***Interest/value***<br>*The students has some interest in the task or sees the value of completing it* | ***Relatedness***<br>*Completing the task brings the student social rewards, such as a sense of belonging to a classroom or other desired social group, or approval from a person of social importance to the student* |
| Ryan & Deci[1] | *Self-determination theory* suggests a framework of three factors that must be met for a task to hold interest | Competence is one of three core tenets of self-determination theory<br>People have a need to feel effective | Autonomy is one of three core tenets of self-determination theory<br>People have a need to feel in control over their own choices and decide their own direction | People need either an intrinsic or extrinsic interest in the task for it to be of importance | *Relatedness* is one of three core tenets of self-determination theory<br>People desire to interact with and be connected to others |
| Pintrich[2] | *Motivational science perspective* identifies five "social-cognitive constructs" that interact to lead to higher motivation | Higher confidence in one's abilities leads to higher motivation | Personal goals are essential to motivation<br>"Mastery" goals are more desirable than "performance" goals | Higher levels of interest lead to higher motivation<br>Stronger perceptions of value lead to higher motivation | Social goals are as influential as academic or professional goals<br>Supportive, caring relationships are important for high motivation |
| Seifert[3] | *Reconstructing motivation theory* surveys several other theories to compile five "behavior patterns" that distinguish different causes of motivation | Those with a *mastery* pattern of behavior believe they have a high degree of competence<br>Those with a *learned helplessness* pattern believe they have low competence<br>Those with a *work avoidant* pattern believe they have high competence | Those with a *mastery* pattern feel they are in control of outcomes<br>The *failure avoidant* think they have no control over their success or failure<br>The *work avoidant* choose not to engage in work<br>Those with *learned helplessness* believe their efforts are futile | Those with a *mastery* pattern see worth in tasks that can improve skills/understanding<br>The *work avoidant* think their work has no worth<br>The *failure avoidant* see no value in a task they might fail<br>Those with *learned helplessness* see no worth in attempting any task | The *failure avoidant* fear others' judgment<br>Those with *learned helplessness* attribute all success to others<br>Those who are *passive-aggressive* withhold effort out of wrath towards others |

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| Dweck[4] | *Mindset framework* attributes students' motivation to their understanding of intelligence | How one conceptualizes one's own ability is a factor of mindset<br>In a "fixed intelligence" mindset, success is based on innate ability<br>In a "growth" mindset, success is based on effort and learning | Those with a fixed intelligence" mindset see a direct link between intelligence and outcome<br>Those with a growth" mindset see a direct link between effort and outcome | Those with a "fixed intelligence" mindset think engaging in a task is not worth it if it means risking failure<br>Those with a "growth" mindset see value in tasks that allow them to improve their skills or understanding | Those with a fixed intelligence" mindset see failure as an indication to others that they have low ability or intelligence<br>Those with a "growth" mindset see failure as an opportunity to improve, no direct link to others judgment of their intelligence |
| Bandura[3] | *Self-efficacy theory* says that motivation is based solely on feeling of effectiveness | Motivation is based solely on whether or not one feels capable of performing the task | N/A | N/A | N/A |
| Weiner[3] | *Attribution theory* holds that emotional reactions to an outcome lead students to determine a perceived cause (attribution) of that outcome, which then affects future behavior and motivation | Locus of control is one of three characteristics that define attributions of outcomes; the extent to which a student perceives this locus as internal can determine competence | The extent to which a student perceives an outcome as controllable is one of three characteristics that define attributions of outcomes | The characteristics a student uses to define a certain outcome can determine whether a student will display interest in a task in the future | Comparison to others is one factor that may influence how a student forms attributions |
| Covington[3] | *Self-worth theory* holds that students are encouraged to base self-worth on performance outcomes and alter behavior to avoid failure | Students will not engage in a task unless they feel competent | Students will engage in behavior like procrastination or withdrawal if it means being able to control their perception of failure | Students base their self-worth on performance outcomes and will find value only in tasks that are certain to be successful | Above all, behavior is designed to avoid any appearance of failure |

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| Dweck, Leggett, Nicholls, Pintrich, Garcia[3] | *Achievement goal theory* says that students are motivated by either mastery-based or performance-based goals | Students with mastery goals are concerned with *developing* competence<br>Students with performance goals concerned with *proving* competence | Students with mastery goals see a positive link between effort and outcome<br>Students with performance goals believe outcomes are based on innate ability and uncontrollable factors | Students with mastery goals find value in tasks that further skills or knowledge<br>Students with performance goals find value in tasks that prove ability | Students with mastery goals think others judge them based on effort, strategy<br>Students with performance goals think others judge them based on ability |

Source: Center on Education Policy, based on the footnoted sources below and adapted from figure 1 in Murray, A. (2011). Montessori elementary philosophy reflects current motivation theories. *Montessori Life, 23*(1), 22-33.

[1]Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American, 55*(1), 68-78.

[2]Pintrich, P. R. (2003). A motivational science perspective on the role of student motivation in learning and teaching contexts. *Journal of Educational Psychology, 95*(4), 667-686.

[3]Seifert, T. L. (2004). Understanding student motivation. *Educational Research (46)*2, 137-149.

[4]Dweck, C. S. (2010). Mindsets and equitable education. *Principal Leadership, 10*(5), 26-29.