

A Holistic Approach to Teacher Self-Efficacy

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Introduction

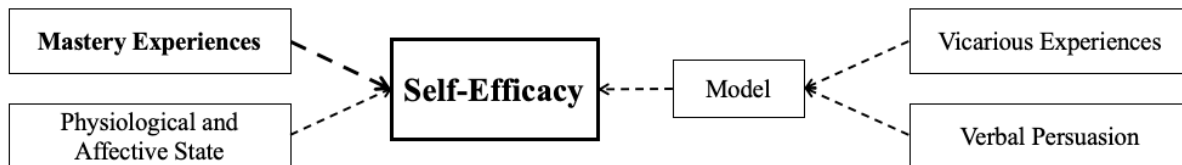
Self-efficacy is a significant predictor of future behavior (Bandura, 1986) and has shown correlation with teacher effectiveness, teacher retention, and student learning (Tschannen-Moran & Hoy, 2001). Teachers with higher self-efficacy have shown to include more student-centered techniques, lead an orderly classroom, and design impactful learning opportunities (Wilson et al., 2020). For these reasons, teacher self-efficacy is a popular topic in school-based agricultural education (SBAE) research (McKim & Velez, 2016).

Commonly, this research is descriptive in nature and reliant on self-report data (McKim & Velez, 2016; Wolf, 2011). SBAE literature tends to report composite self-efficacy and/or total self-efficacy scores (McKim & Velez, 2016; Robinson & Edwards, 2012). These data are a snapshot of self-efficacy in that place and time but fail to portray a teacher’s full self-referent belief of their abilities (Bandura, 1997). When informing teacher education and professional development, it is vital for researchers to fully understand teacher self-efficacy (Bandura, 1997). McKim and Velez (2016) suggested exploring the origins of self-efficacy beliefs to broaden the understanding of teacher self-efficacy within SBAE.

Four forces work in tangent to create a sense of self-efficacy (Bandura, 1977). Bandura (1997) outlined these sources as illustrated in Figure 1. Mastery experiences, perhaps the most impactful source of self-efficacy, are personal experiences in comparable tasks and circumstances. Vicarious experiences and verbal persuasion are external sources of self-efficacy that are largely dependent on the source, a model which is perceived as competent and possessing similar characteristics. This model serves as the filter for internalizing others’ experiences and words in personal beliefs of self-efficacy. Lastly, physiological and affective state identifies the influence of mental, physical, and emotional circumstances on self-efficacy. In general, a positive mastery experience, vicarious experience, verbal persuasion, and physiological and affective state will transfer to a higher sense of self-efficacy, likely resulting in a motivation to perform specific behaviors in the given context (Bandura, 1977).

Figure 1

Sources of Self-Efficacy (Bandura, 1997)



Methodology

We suggest researchers consider a more holistic view of teacher self-efficacy. “Information that is relevant for judging personal capabilities... is not inherently enlightening. It becomes instructive only through cognitive processing of efficacy information and through reflective thought” (Bandura, 1997, p. 79). In addition to measuring teacher self-efficacy, researchers need to ask *why* teachers hold these beliefs and *how* those beliefs were formed.

Studies grounded in the theory of self-efficacy could incorporate sources of self-efficacy in research questions. These sources may be investigated using multiple methodologies. Qualitative interviews with protocols grounded in the Bandura's theory would elicit data highlighting the origins of teacher self-efficacy. These open-ended questions could also be included in survey instruments. These data could be *a priori* coded to reflect the four sources of self-efficacy. We posit frequency counts could serve to display the specific impacts and magnitude of formative events in a teacher's sense of self-efficacy.

An explanatory sequential mixed methods approach would measure teacher self-efficacy with a quantitative instrument while gathering sources of self-efficacy through qualitative measures. Many pre-existing instruments are available, such as the widely used Teacher Sense of Efficacy Scale (Tschannen-Moran & Hoy, 2001) or Wolf's (2011) SBAE specific instrument. Qualitative data could then be used to explain quantitative findings.

Implications

By better understanding the origins of teacher self-efficacy, teacher educators and professional development providers will be better equipped to design and deliver effective instruction aimed at impacting teacher self-efficacy (Bandura, 1997). Additionally, a deeper exploration of teacher self-efficacy may allow researchers to explain discrepancies between teacher self-efficacy and performance (Robinson & Edwards, 2012). Once the cognitive processes of teacher self-efficacy have been adequately mapped, behavior may be better understood and predicted (Bandura, 1997).

By identifying influential models contributing to teachers' self-efficacy, researchers could inquire which characteristics are important for cooperating teachers and mentors. SBAE teacher educators, recruiters, and state staff could use the characteristics of effective models in matching preservice and early career teachers as well as training cooperating teacher and mentors. Modeling can also be very important in recruiting future SBAE teachers (Myers et al., 2003). Finding what and who impacts SBAE teacher self-efficacy would provide immense utility in teacher education.

Future Plans

This theoretical framework will continue to be utilized in future researcher projects, dissertations, and theses. Additional peer-reviewed feedback will be sought to refine the methodology.

Resources

Time is the greatest resource requirement to studying teacher self-efficacy from a holistic viewpoint. Gathering and analyzing additional data dedicated effort from experts. Researchers must also possess knowledge and skill in relation to mixed methods data integration. Though mixed methods studies require additional time, effort, and assets, the additional data provided with this approach could contribute new ideas to our profession.

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