

**Appendix B**  
**Reported Inputs and Outcomes in Preservice Studies**

Authors, Year	Inputs						Outputs		
	Content Models	Teaching Models	Content Practice	Lesson Planning	Teaching Practice	Reflection	Increased Content Knowledge	Increased Pedagogical Knowledge	Changed Attitudes or Beliefs
<b>CS as Content</b>									
Cetin, 2016	X		X				X		
Cetin & Andrews-Larson, 2016	X		X				X		
Jeon & Kim, 2017			X						X
Ng, 2017		X	X	X	X		X	X	
Sadik et al., 2017				X	X	X	X		
<b>Integrated CS</b>									
Chang & Peterson, 2018		X	X			X	X	X	X
Jaipal-Jamani, 2018	X		X				X		X
Jaipal-Jamani & Angeli, 2017	X		X				X		X
Kaya et al., 2018			X						X
Kim et al., 2015			X	X					X
Ma et al., 2008		X			X	X	X	X	
Yadav et al., 2014	X	X	X	X		X	X	X	X