

Chapter 8

Culturally Relevant Preparedness Using STEAM Integrative Teaching in the Classroom

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ABSTRACT

Although there exist some studies that examine culturally relevant teaching and its positive impact on learning outcomes; overall, these studies are not abundant, and teachers are generally unaware of the educational frameworks that would allow them to apply their theoretical knowledge of culturally relevant preparedness in practice. In this respect, STEAM can be a perfect solution for reinforcing culturally relevant teaching at schools. First, culturally relevant teaching requires certain conditions (e.g., diversity, inclusion, a teacher's willingness to learn, etc.) that are inherent in the STEAM educational framework. Second, the STEAM educational framework shares similar values with culturally relevant teaching (e.g., brain focus on social and cross-cultural skills, pedagogical focus on teachers' learning, etc.). Finally, the literature review demonstrates that there are numerous strategies of using the STEAM educational framework to reinforce culturally relevant teaching (e.g., to design a culturally relevant program based on STEAM).

INTRODUCTION

Culturally relevant teaching is one of the most under-researched areas in education. The difficulties of researching it are, first and foremost, rooted in broadness and ambiguity of the concept as such. In this respect, Byrd (2016) offers a detailed overview of the limitations of the research on culturally relevant teaching. According to him, this research is characterized by three major limitations. To begin with, the critical limitation is that there are few studies that have empirical results regarding the effects that culturally relevant teaching. This has several explanations. Thus, it is highly problematic to determine

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whether a teacher uses culturally relevant teaching or not. As a result, we, as researchers, have to rely on their claims though in fact, it might turn out that those who say that they use culturally relevant teaching do not do this in reality (they say they do to produce a positive impression), while those who say they do not use the elements of culturally relevant teaching, actually use them but they are not aware of this. Moreover, when we research the effects of culturally relevant teaching, we inevitably face the problem of understanding whether this or another effect (e.g. improved academic achievements) is the result of culturally relevant teaching, another intervention, or both. The second limitation of the existing research on culturally relevant teaching is that it completely overlooks the students' perspective (Byrd, 2016). Thereby, it is necessary to realize that when we speak about culturally relevant teaching, we speak of what we know from theorists, researchers, and teachers practicing it. Even when we say that culturally relevant teaching affects students in this or another manner, our claims are based on what we have learned from teachers who, in turn, rely on their observations and experience. Finally, the third limitation is that the discourse on culturally relevant teaching is generally focused on predominately black classrooms (Byrd, 2016). This creates an impression that culturally relevant teaching is a sort of specifically designed educational program that is supposed to benefit minority cultures, whereas, in fact, it is an entire educational philosophy that should be obligatorily integrated into the educational process of the twenty-first century.

In this chapter, we tried to overcome (at least, to an extent) the limitations of the discourse on culturally relevant teaching and offer a new perspective on how this teaching can be integrated into the classroom. Thus, this chapter aligns the concept of culturally relevant teaching with that of the STEAM educational framework (that is far better defined and acknowledged). Because the latter is widely practiced and, as this chapter later shows, has a lot in common with the former, we believe that it can be an effective and non-trivial solution to use the elements of the STEAM educational framework in order to enforce culturally relevant teaching. The structure of the chapter is thus designed to offer a step-by-step explanation of how the two educational philosophies can be merged to deliver positive learning outcomes. First and foremost, we provide a detailed description of culturally relevant teaching, its characteristic features, the underpinning approaches, and related challenges. Further on, we explain how culturally relevant teaching can be aligned with the STEAM educational framework and why it is a good idea to use them in a combination. In the second part of the chapter, we describe some practical strategies of how our concept can be realized in practice.

BACKGROUND

Theoretical Perspectives

To begin with, it is necessary to define what culturally relevant preparedness means in today's education. In this respect, Byrd (2016) offers a comprehensive definition of culturally relevant preparedness that relies on three major characteristics. First and foremost, he explains that culturally relevant preparedness allows teachers to "create classroom climates that are respectful and inclusive and that help students value and understand the cultures of their peers" (Byrd, 2016, p. 1). Second, he argues that this preparedness is unattainable unless a teacher has a clear understanding of the students' communities, traditions, and home lives. This understanding is essential to assist students in getting acquainted with different cultures, tolerating differences and accepting other cultures' individuality. The third major

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