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THE PROJECT METHOD IN AGRICULTURAL EDUCATION: THEN AND NOW

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Abstract

The purpose of this philosophical paper was to synthesize theoretical and historical foundations of the project method and compare them to modern best-practices. A review of historical and contemporary literature related to the project method yielded six themes: 1) purpose of projects; 2) project classification; 3) the process; 4) the context; 5) individual vs. group projects; and 6) the teacher's role. Conclusions and recommendations include the continued importance of the project method with suggestions to broaden the context in which projects are classified (in class and out of class, group and individual), ensure that practitioners are educated about appropriate experiential learning processes, and emphasize the role of the teacher as facilitator.

Introduction

Thirty-one carefully crafted words from the Smith-Hughes Act of 1917 (as cited in Phipps & Osborne, 1988, p. 550), "that such schools shall provide for directed or supervised practice in agriculture, either on a farm provided for by the school or other farm, for at least six months per year," have led to a marriage between agricultural education and the project method. The project method, now referred to as Supervised Agricultural Experience (SAE) in agricultural education, is still acknowledged as an integral part of the complete program and still advocated as important for career preparation (Camp, Clarke, & Fallon, 2000; Newcomb, McCracken, Warmbrod, & Whittington, 2004; Talbert, Vaughn, & Croom, 2005). However, evidence suggests that successful implementation of the project method is declining (Dyer & Osborne, 1995; Steele, 1997). Camp et al. further reported that agricultural science teachers widely viewed SAE as inappropriate for their specific setting.

The incongruence of what is accepted as integral and what actually occurs in practice places agricultural education in a quandary. If the project method is an essential component of agricultural education then why are practitioners not unilaterally implementing projects with all students? Perhaps examining modern best-practices for the project method against theoretical and historical foundations of the project method may provide some insight and direction to advance practice and research.

Theoretical Framework

"A project is a problematic act carried to completion in its natural setting" (Stevenson, 1925, p. 43). The real value of the project method is that it connects school to the real world (Stockton, 1920). According to Stevenson, the educational use of the word 'project' was borrowed from the United States Department of Agriculture, which used the term to describe planned investigations conducted by experiment stations and planned demonstrations conducted by the extension service. According to Alberty (1927), "a project is an activity, the aim of which is a result or accomplishment of an end, other than learning (i.e. the acquisition of knowledge, skills, etc.), which is of value to the pupil" (p. 90). He further elaborated that the project method is a technique employed by a teacher in which a tangible goal or product provides the motivation for completion. Acquisition of knowledge is a by-product of the project method. Although valuable, Alberty acknowledged that the project method must never be the sole technique employed in educating students. To do so,

he argued, would prohibit "the use of systematic organizations of knowledge, as tools for securing more knowledge" (Alberty, p.107). Earlier, Stockton concluded that "since 'learning to do by doing' is central in education, all subjects should be taught by a project method" (p. 167).

An examination of the literature regarding the origins of the project method reveals some debate. In general educational circles, William H. Kilpatrick (1918) is often credited with conceptualizing the method, while evidence suggests that Rufus W. Stimson (1919) may have been the originator of the method (Moore, 1988). Field (1933) attributed the theoretical and philosophical foundation of the project method to Kilpatrick. In contrast, Stevenson (1925) credited Stimson, along with his colleagues Snedden and Prosser, in first using the project method in secondary schools. Yet other literature (Knoll, 1997) credits European scholars in the 16th century who used the project method in architectural and engineering education, centuries before the progressive movement in the United States. The introduction of these conflicting accounts about the origin of the project method is meant to enlighten the reader. This article does not attempt to advance this discussion, but readers should acknowledge the existence of relevant theories from multiple scholars on the project method.

Stockton (1920) largely referenced Dewey's theories presented in *How We Think* (1910) to establish a theoretical foundation for the project method. Accordingly, Stockton argued that the child does not develop in isolation, but rather through interaction and experience with his or her environment, which is consistent with the work of Vygotsky (1978).

From an epistemological perspective, the project method aligns with constructivism and its central precept that learners construct knowledge based on their experiences (von Glasersfeld, 1995). More specifically, the project method concurs with experiential learning theory, which asserts that learning occurs as a result of experiences had by the learner (Dewey, 1938; Kolb, 1984; Roberts, 2006). Conceptually, the project method was examined through an *Integrative Inquiry* (Marsh, 1991; Short, 1991) of historical and contemporary texts, journals, and other relevant publications identified through an exhaustive review of the literature. Themes were identified using the constant comparative method (Glaser & Strauss, 1967).

Purpose

The project method is an essential component of the triadic model of agricultural education programs. However, the extent that modern practices of implementing the project method are grounded in theory is uncertain. As such, the purpose of this philosophical paper was to synthesize theoretical and historical foundations of the project method and compare them to modern best-practices. Doing so may provide some insight and direction to advance practice and research. Readers should note that this manuscript WAS NOT an attempt to synthesize all relevant literature for SAE; for that purpose see the work of Dyer and Osborne (1995, 1996) and Dyer and Williams (1997a, 1997b).

Findings

An examination of the literature to identify theory and best practices associated with the project method yielded six themes: 1) purpose of projects; 2) project classification; 3) the process; 4) the context; 5) individual vs. group projects; and 6) the teacher's role. Accordingly, the findings for each theme are presented below. For purposes of this manuscript, modern best practices were identified by examining texts used in the preparation of preservice agricultural educators (Newcomb et al., 2004; Talbert et al., 2005).

Purpose of Projects

Early approaches to implementation of the project method in agricultural education were characterized by a sequence of activities conducted out of class and then supplemented with in-class instruction (Colvin & Stevenson, 1922; Stimson, 1919). Often referred to as "home projects," projects focused on acquiring the necessary

skills and knowledge to be successful farmers (i.e. career preparation). Twenty years later, the purpose was much the same, but projects were often referred to as "supervised farming" (Deyoe, 1947). The purpose of projects in agricultural education expanded beyond gaining proficiency in farming to include other agricultural occupations (Phipps, 1965). Interestingly, Phipps used the term "supervised agricultural experience," which is often used today as a synonym for the project method in agricultural education. The focus in gaining skills in a wide variety of agricultural occupations was also outlined by Phipps and Osborne (1988) as the purpose of "supervised occupational experience programs." Today, the purpose of the project method in agricultural education has expanded further. For example, Newcomb et al. (2004) proclaimed that "supervised agricultural experience" leads to improved learning, student personal development, and career development. Talbert et al. (2005) identified six purposes of "supervised experience." These included: 1) skill development; 2) gain experience; 3) develop personal and employability characteristics; 4) participate in the work world; 5) developing student interest in agriculture; and 6) learn financial management skills.

Project Classification

An examination of the literature reveals several methods of classifying projects. Historically, one approach has been to classify projects based on the purpose or outcomes (Kilpatrick, 1918, 1925), while another approach has been to classify projects based on the actions of the learners, rather than project outcomes (Davis, 1927; Stimson, 1919). More recent approaches, specifically in agricultural education, use a combination of learner action and purpose to classify projects (Camp et al., 2000; Newcomb et al., 2004; Talbert et al., 2005).

Kilpatrick (1918, 1925) proposed a classification of project types, indicating the continuum on which project *outcomes* may fall. The outcome of *Type 1* or *Producer's* projects is a tangible product, for instance, a student may build or produce something. *Type 2* or *Consumer's* projects create affective outcomes, such as enjoyment or appreciation. Solving a problem is the purpose of *Type 3* or *Problem* projects. While for a *Type 4* or *Specific Learning* project, the outcome is of a certain level of proficiency or skill. However, Kilpatrick (1918) cautioned that the delineation between each project type is not rigid and, in practice, overlapping occurs.

Stimson (1914, 1919) specifically theorized about the project method as the learning vehicle for agricultural education. When classifying projects, Stimson's definition centered on the precept that a project "is something to be done" (1919, p. 40). As such, he classified projects based on the actions of the learner, as *Improvement* projects; *Experimental* (1914) or *Trial* (1919) projects; or *Productive* projects. In Stimson's view, *Productive* projects are the foundation of the project method and *Improvement* and *Experimental/Trial* projects are desirable when feasible.

An *Improvement* project consists of the learner making an improvement around the farm (Stimson, 1914, 1919). Examples presented by Stimson included constructing a concrete sidewalk, planting trees, and establishing a lawn. An *Experimental* or *Trial* project is characterized by the testing of a new or untried system. Examples cited included testing a new variety of fruit trees, a new spray mixture, or new roofing materials. Finally, with a *Productive* project, the learner produces an agricultural commodity. Examples included a crop of clover, a field of potatoes, or producing eggs for market.

Similarly, Davis (1927) classified projects based on their aims. *Productive* products involved producing an agricultural product for profit. *Trial* projects were undertaken to test a new or innovative method or product. *Improvement* projects aimed at enhancing one's surroundings. *Management* projects focused on developing the student's managerial skills.

More recent project classification systems in agricultural education have blended the actions of the learner and intended outcomes of the projects. For example, Newcomb et al. (2004) proposed three general classifications of projects:

Ownership; *Placement* or *Cooperative*; and *Improvement* or *Skill Development*.

Ownership projects relate to the career interests of the students and can be implemented as *Production* projects, *Group Enterprise* projects, or *Entrepreneurship* projects (Newcomb et al., 2004). *Production* projects involve producing an agricultural commodity, *Group Enterprise* projects engage the learner to work with others to produce something, and *Entrepreneurship* projects entail learners developing an agriculturally related business (Newcomb et al.). All three variations of *Ownership* projects are consistent with Kilpatrick's (1918, 1925) *Type 1* or *Producer's* projects, Stimson's (1914, 1919) *Productive* projects, and Davis' (1927) *Productive* projects. However, the notion of ownership of a non-production project was not directly addressed by Kilpatrick or Stimson, but was consistent with Davis' *Managerial* project.

According to Newcomb et al. (2004), the purpose of *Placement* or *Cooperative* projects is "the learning and application of needed agricultural knowledge and skills" (p. 249). To achieve this goal, learners are placed in relevant agricultural operations, businesses, or industries (Newcomb et al.). Although not directly referenced by Kilpatrick (1918, 1925), this type of project is consistent with the intended outcome of a *Type 4* or *Specific Skill* project.

The final classification of projects proposed by Newcomb et al. (2004) was an *Improvement* or *Skill Development* project. The authors further delineated this type of project into *Improvement* projects and *Skill Development* projects. The purpose of an *Improvement* project is to improve the learner's surroundings, often at home or at a business; and the purpose of a *Skill Development* project is to learn and practice a specific skill (Newcomb et al.). Projects with these purposes are consistent with Kilpatrick's (1918, 1925) *Type 4* or *Specific Learning* project, Stimson's (1914, 1919) *Improvement* project, and Davis' (1927) *Improvement* project.

In a more refined classification system, Talbert et al. (2005) identified seven types of projects in agricultural education: 1) exploratory; 2) paid placement; 3) unpaid placement; 4) entrepreneurship/ownership; 5) directed laboratory; 6) research and experimentation; and 7) improvement. Camp et al. (2000) proposed a similar taxonomy with eight types of projects: 1) agribusiness entrepreneurship; 2) agricultural placement; 3) agricultural production; 4) agricultural research; 5) directed school laboratory; 6) agricultural communications; 7) agricultural exploration; and 8) improvement projects. The notable difference between Talbert et al. and Camp et al. was the inclusion of *Agricultural Communications* projects in the latter. Because of the similarity of the two classification systems, they are discussed together.

The purpose of an *Exploratory* project is to "help students understand and appreciate the field of agriculture and gain information to help them make decisions about their future education and careers" (Talbert et al., 2005, p. 424). In comparison to the historical classification systems, exploratory projects have similar outcomes as Kilpatrick's (1918, 1925) *Type 2* or *Consumer's* project, mainly gaining an appreciation for the focus of the project. However, Talbert et al. presented a much narrower, vocational focus of the *Exploratory* project, primarily career exploration. Camp et al. (2000) added that this type of project is particularly appropriate for younger students, including middle school students.

The next type of project was *Placement*. Although presented as two different projects by Talbert et al. (2005), *Paid* and *Unpaid Placement* have the same purpose, which is to develop a set of skills necessary to enter a particular career or occupation, the delineation between the two being if the learner is paid for their efforts or not. Camp et al. (2000) referred to this type of project as work-based education. These projects are congruent with Kilpatrick's (1918, 1925) *Type 4* or *Specific Skills* project, where the outcome was a specific set of skills or knowledge.

The next classification of projects presented by Talbert et al. (2005) was an *Entrepreneurship* or *Ownership* project, which is characterized by the learner owning and developing an agricultural enterprise.

This type of project is consistent with Kilpatrick's (1918, 1925) *Type 1* or *Producer's* project, where the outcome is a tangible product and Stimson's (1914, 1919) *Productive* project, where the learner produces an agricultural commodity. However, modern interpretations of an *Entrepreneurship* projects go beyond Stimson's exclusive criteria of the production of agricultural commodities and now includes related business ventures (Talbert et al.), which is consistent with *Managerial* projects presented by Davis (1927).

The *Directed Laboratory* project is a hybrid type of project, utilized mainly for students who are unable to initiate another form of project (Camp et al., 2000; Talbert et al., 2005). The purpose and activities undertaken by the learner vary greatly, but often require little or no financial investment from the student and are often conducted in facilities on the school campus. Given the plethora of possibilities, it is possible that a *Directed Laboratory* project could take the form of any of the projects proposed by Kilpatrick (1918, 1925) and Stimson (1914, 1919).

According to Talbert et al. (2005), a *Research* or *Experimentation* project is characterized by the learner seeking the answer to a problem using scientific approaches, often experimentation. Concordantly, this type of project is consistent with *Type 3* or *Problem* projects as proposed by Kilpatrick (1918, 1925), *Experimental* or *Trial* projects as presented by Stimson (1914, 1919), and *Trial* projects (Davis, 1927).

The final type of project proposed by Talbert et al. (2005) was an *Improvement* project, which the authors posit is often conducted in conjunction with other projects to make some sort of improvement, often at home or in the community. Furthermore, this type of project could be facilitated as a group or individual effort to advance the agricultural knowledge or skill of the learner (Talbert et al.). From an improvement perspective, the newer classification is consistent with Stimson's (1914, 1919) *Improvement* project and Davis' (1927) *Improvement* project; while from a gain in skill and knowledge perspective, it is congruent with Kilpatrick's (1918, 1925) *Type 4* or *Specific Learning* project.

One final type of project, presented only by Camp et al. (2000) was the *Agricultural Communications* project. Although the authors did not offer any specific examples of projects in this area, they inferred that it would align with the skills and competencies required in university agricultural communications programs.

The Process

The project method was overwhelmingly accepted as an effective learning activity by nearly every piece of literature consulted (Camp et al., 2000; Davis, 1927; Kilpatrick, 1918, 1925; Newcomb et al., 2004; Stimson, 1914, 1919; Talbert et al., 2005). However, only a few scholars addressed the process by which learning occurs with the project method.

Stimson (1919) posited that the project method is correctly implemented through induction and then application. Accordingly, the "educational cycle" is completed when "the movement from observed data of agricultural production, to general laws and principles, is followed by the reverse movement, which is embodied in the application of the laws and principles of science" (Stimson, 1919, p. 93). This process is remarkably similar to the *Experiential Learning* model proposed by Kolb (1984) in which learning occurs with concrete experience, reflective observation, abstract conceptualization, and active experimentation.

Kilpatrick (1918, 1925) articulated the clearest processes for the project method. In fact, Kilpatrick presented distinct processes for each of the project types he proposed. Kilpatrick (1925) referred to *Type 1* projects as *Producer's* projects, where the purpose is to produce something. However, products of *Type 1* projects are not exclusively limited to things produced by the hands (Kilpatrick, 1925). For *Type 1* projects, Kilpatrick (1918) proposed four steps required for successful implementation: purposing, planning, executing, and judging. Beyond the tangible product, Kilpatrick indicated that a secondary outcome of *Type 1* projects is increased social activity in the classroom (Figure 1).

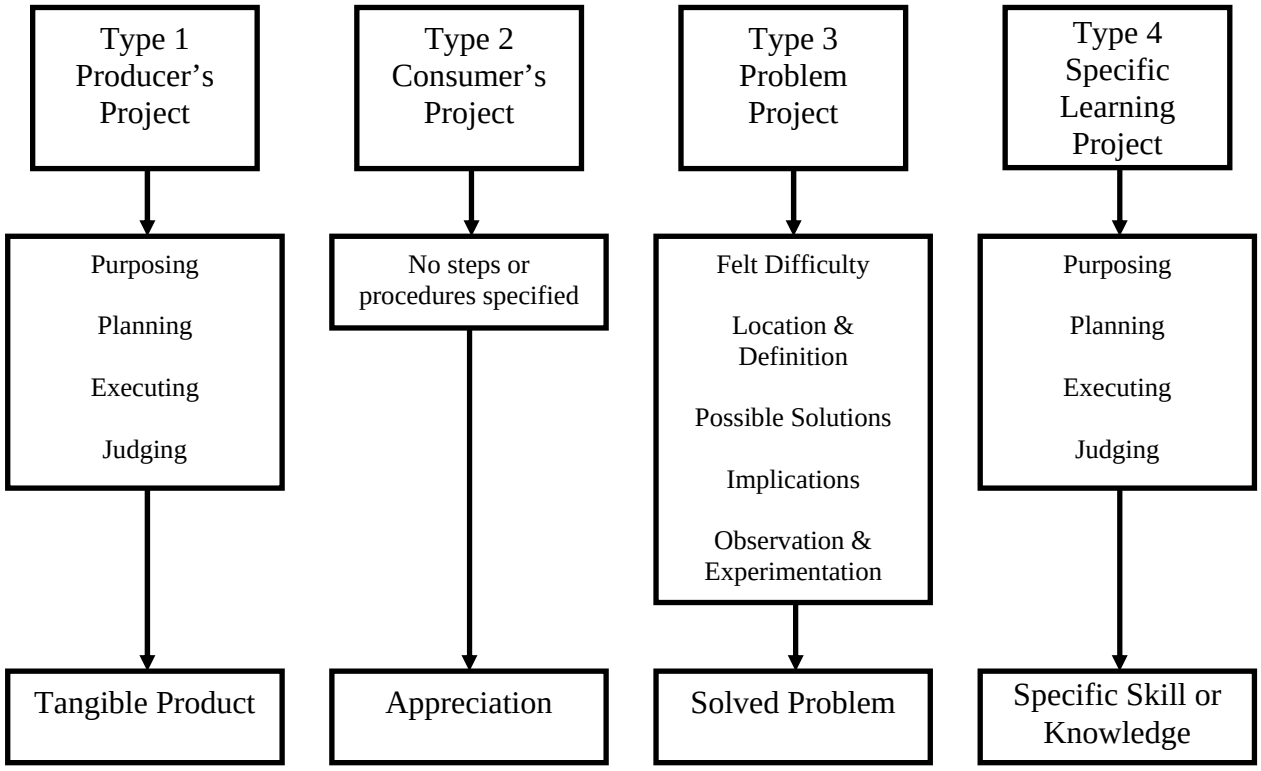

Figure 1. Project Method Processes (Kilpatrick, 1928, 1925).

The outcome of a *Type 2* project is an appreciation for the subject of the project (Kilpatrick, 1918). In his later work, Kilpatrick (1925) referred to *Type 2* projects as *Consumer's* projects, where the learners consume the work of others by enjoying the products. Kilpatrick (1918) readily conceded that enjoying an aesthetic experience may not meet the same rigorous benchmarks as other types of projects. However, he posited that because a defined purpose guided the process of undertaking this type of project, it was indeed a distinct type of project (Kilpatrick, 1918, 1925). Accordingly, if the activity had no defined purpose, it would not be a project (Kilpatrick, 1925). The notion of an affective outcome of a project does not rest solely with Kilpatrick (1918, 1925). In concordance, Steinaker and Bell (1979) postulated that one outcome of experiential learning is identification, which is reached when the learner "has begun an emotional and personal intellectual identification with the experience" (p. 66). Although Kilpatrick (1918, 1925) substantiated the distinction of this type of project, his argument was weakened by his inability to delineate the process for successfully completing a *Type 2* project.

Kilpatrick (1918) articulated the purpose of a *Type 3* project was to solve a problem, which he later referred to as a *Problem* project (Kilpatrick, 1925). This type of project often results as an outgrowth of a *Type 1* project (Kilpatrick, 1925). Kilpatrick (1925) made a clear distinction about the source of a problem or purpose of the project. A problem assigned by the teacher does not provide purpose to the student and thus is merely a task, while a student-identified problem provides purpose and is thus a suitable project (Kilpatrick, 1925). To successfully complete a *Type 3* project, Kilpatrick (1918) advocated following Dewey's (1910) steps to reflective thought:

> (*i*) a felt difficulty; (*ii*) its location and definition [defining the problem]; (*iii*) suggestion of possible solution; (*iv*) development by reasoning of the bearings of the suggestion [implications of possible solutions]; (*v*) further

> observation and experiment leading to its acceptance or rejection (p. 72).

Kilpatrick's (1918) statement that this type of project lends itself "best of all to our ordinary school-room work" (p. 333) foreshadowed the development and utilization of the 'problem-solving approach' to teaching used by many agricultural educators (Parr & Edwards, 2004). However, given the ease of implementing *Type 3* projects, Kilpatrick (1918) expressed fear that this type of project could be over-emphasized.

The purpose of *Type 4* projects is to learn a specific skill or knowledge (Kilpatrick, 1918), which he later referred to as *Specific Learning* projects (1925). To achieve these ends, Kilpatrick (1918) posited that the same steps used in *Type 1* projects (purposing, planning, executing, and judging) were suitable. Kilpatrick (1918) went further to caution that some teachers may incorrectly identify drill as a *Type 4* project, which he posited would have noticeably different results, mainly due to the purpose of the activity (Kilpatrick, 1925).

Project Context

Examining the context or setting in which the project method is implemented produced some discrepancy between historical practice and modern best practices. Historically, the project method was implemented during the school day. In contrast, student projects are considered an out-of-class activity.

For example, Stockton (1920) presented two paradigms for implementation of the project method. The first was using the project method as a learning activity in a class. The second was implementation of the project as a stand alone class, whereby the student is provided time during the school day to learn by doing. Stimson (1919) went even further. He advocated that project study be a scheduled part of the school day where the student is able to work independently. In fact, Stimson proposed that as much as one-half of each school day be dedicated to project work.

This school time dedicated to conducting a project could occur at home (Colvin & Stevenson, 1922; Deyoe, 1947; Stimson, 1919) or at school provided facilities that approximated *real-world* settings (Dewey, 1916; Kilpatrick, 1925; Stimson, 1919; Vasquez-Torres, 1939). The importance of a real-world setting was echoed by Stevenson (1925), who made a clear distinction between a real (natural) and artificial setting. A *project* is carried out in a natural setting, while a *problem* is carried out in an artificial setting. For example, if a student was investigating the effects of fertilizers on plant growth, an experiment conducted in his home garden would be a *project*. Conversely, an experiment conducted in a lab would be a *problem*.

In contrast to the historical opinions cited above, modern interpretations of the project method by agricultural educators center on conducting projects outside the normal school hours. For example, Newcomb et al. (2004) proposed that projects are agricultural activities that are "conducted by a student outside of class" (p. 243). Although not stated explicitly, Talbert et al. (2005) posited that projects allow students to apply principles learned in class to real life settings, which the authors implied as out-of-class.

Individual vs. Group Projects

The notion of students individually or jointly working on a project is prevalent in the historical and modern literature. For example, Davis (1927) used individual or group projects as one of his criteria to classify projects. As practice advanced through the years, the notion of both individual and group projects can be seen. For example, Deyoe (1947), Cook (1947), Phipps (1965), Phipps and Osborne (1988), Newcomb et al. (2004), and Talbert et al. (2005) all discussed both individual and group projects in agricultural education.

Teacher's Role

The role of the teacher in the project method has remained constant. According to Kilpatrick (1918), the teacher should assume a facilitative role by giving the student freedom to try things, but intervene to prevent failure or considerable wasting of time. Kilpatrick further advocated that as a student's experience level develops, they

take greater responsibility in evaluating the results of their project and connecting what they learned with previous and future experiences, which we would now refer to as scaffolding (Vygotsky, 1978). Newcomb et al. (2004) and Talbert et al. (2005) concurred.

The responsibility of planning the project varies greatly among theorists. For example, Stimson (1919) advocated that there should be a prescribed set of required projects that a student completes in a particular order. Kilpatrick (1918), however, advocated much more of a student-directed approach where each student is responsible for identifying the goals or purpose of the project, planning the project, completing the project, and then evaluating their results. Newcomb et al. (2004) and Talbert et al. (2005) presented a compromise where the teacher, along with parents and employers (if applicable), should work with the student to plan the project.

Conclusions

Based on the literature consulted in preparing this manuscript, several conclusions can be made. First, the project method was historically and is still advocated as an important part of an agricultural education program that provides application of concepts taught in class. However, the purposes of projects in agricultural education have expanded beyond skill acquisition and proficiency to include personal development for diverse career preparation beyond agriculture.

Considerable attention has been directed to classifying projects. Nearly every source consulted in preparation of this manuscript proposed a classification system. In general, the more recent systems have added additional project types in an attempt to be inclusive of the vast array of projects that students undertake.

Roberts (2006) outlined that experiential learning has two dimensions: the process and the context. Based on the literature consulted in this examination, it was concluded that the process of using the project method received considerable attention in the early literature, but has received little or no attention in the recent literature. The context in which the project method is implemented seems to have narrowed. The early literature supported the conduct of projects at school and at home, both during school and out of school. In contrast, the modern literature presented projects as predominantly off-campus and out of school. One notable exception was directed laboratory projects, as proposed by Camp et al. (2000) and Talbert et al. (2005), which are conducted on-campus and may utilize some in-class time.

The findings support the conclusion that both individual and group projects have been advocated from the earliest implementation of the project method through modern practice. However, it was unclear of the extent group projects have been utilized in agricultural education.

Finally, it was concluded that the teacher's role in the project method is now very much as a facilitator. Early literature presented conflicting roles, some supporting very teacher-directed projects and others advocating projects that place the entire responsibility on the student. Modern theories are consistent in that the teacher (along with parents and perhaps employers) should provide guidance and support, but give the student considerable responsibility in planning, conducting, and evaluating the project.

Recommendations/Implications

Based on the conclusions of this study, several recommendations can be made. First, the broader purposes for utilizing the project method reflect the divergent careers that agricultural education students pursue. It is recommended that practitioners carefully explore the goals of each student and encourage appropriate projects. This implies that although two students may have similar projects, the intended learning outcomes may differ considerably (e.g., technical skill mastery vs. personal development). The extent that this is currently happening is unclear, so inquiry into this area is also recommended.

Although considerable effort has been expended to develop a comprehensive system in which to classify agricultural education projects, such a system may in

fact impede the creative development of some projects. For example, attempting to place an innovative project into an existing category may cause the scope of the project to be adjusted to better fit the category. It is recommended that practitioners use the existing classification systems merely as a guide for possible projects and not as an inclusive list.

Capturing the greatest amount of learning from a project requires successful implementation of an appropriate process, which the modern literature did not present. It is recommended that practitioners be educated about appropriate experiential learning processes (Kolb, 1984; Roberts, 2006) so they may better implement the project method. This implies that texts used in preservice programs should address these same processes. From this inquiry, the deficiency of process theories in texts is known. However, it is unknown if teacher educators teach process theories. Accordingly, it is recommended that current practices in preservice programs be studied.

Conducting projects at school, during school hours, is supported in the historical literature, but hardly advocated in the modern literature. Additionally, the option of group projects is universally presented in the literature. It is recommended that practitioners, particularly those with difficulties in successful implementation of the project method, consider employing projects conducted at school, during school hours, and possibly conducted by a group of students. This implies that a change in mindset is necessary for those practitioners who view projects as exclusively after school, off-campus, and individual activities. Studying programs that are successful and unsuccessful at implementing the project method could aid in developing and refining best-practices to guide future practice.

Finally, the notion that teachers should assume a facilitative role is widely accepted as appropriate and is consistent with experiential learning theory (Kolb, 1984). However, the extent to which practitioners are prepared to do so is unclear and worthy of further study. It is recommended that teacher educators examine their curricula to ensure this is emphasized and that authors of texts used in these programs examine their content as well.

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