

Changes in Student Expectancies and Values in Different Lessons

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Abstract

Students can be motivated to learn in some lessons but in other lessons they appear to be unmotivated. If expectancies and values play an important role in the way students approach learning tasks then we would expect their expectancies and values to differ from one lesson to another, but few studies of expectancies and values have investigated lesson-lesson differences. The purpose of this study was to compare expectancies and values when students do feel motivated compared to when they do not feel motivated. The participants were 24 grade 10 students who participated in individual interviews. It was found that more highly positive expectancies and values were associated with lessons in which students experienced a motivated feeling of wanting to learn. Conversely, less positive expectancies and values were associated with lessons in which students had experienced an unmotivated feeling of not wanting to learn. It was concluded that expectancies and values are very closely aligned with these feelings of wanting to learn or not wanting to learn.

Keywords: Expectancy-value, Motivation, Confidence, Utility, Intrinsic

1. Introduction and Theoretical Framework

According to the expectancy-value theory of achievement motivation (Wigfield & Eccles, 2000) student motivation in educational activities is a function of their expectancies of success and the extent to which they value the activity. Their expectancies and values are assumed to have a direct influence on achievement choices, performance, persistence, and effort. Expectancies of success are defined as students' "beliefs about how well they will do on upcoming tasks, either in the immediate or longer term future" (Wigfield & Eccles, 2000, p. 70). Expectancies also include ability beliefs, which are defined as a student's "perception of his or her current competence at a given activity" (Wigfield & Eccles, 2000, p. 70). Wigfield and Eccles (2000) reported that most studies have measured these beliefs at the domain-specific level, rather than focusing on particular activities within those domains. For example, items such as "How well do you expect to do in math this year?" and "How good in math are you?" have been used to measure expectancies of success (Wigfield & Eccles, 2000, p. 70).

In contrast to expectancies, value is a multifaceted construct that can comprise components such as attainment value, intrinsic value, utility value, and cost. Attainment value is defined as the importance that an individual attaches to the task. Intrinsic value is defined as the inherent enjoyment that one obtains from the task. Utility value refers to the relevance of the task to an individual's future goals. Cost has been defined as the extent to which participation in the task will limit one's participation in other activities, or assessments of the amount of effort required by the task, or the emotional cost of the task (Wigfield & Eccles, 2000).

One's expectancies of success and value beliefs are influenced by a wide range of other factors. Eccles (2009) argued that these precursors could include causal attributions, input from teachers, parents, peers, and the media, self-perceptions, cultural norms, and perceptions of behaviors and activities. For example, one's expectancies of success are primarily influenced by ability self-concepts and perceptions of task difficulty (Eccles, 2009). Factors such as these influence one's expectancies and values, which in turn influence how one engages with various activities. Over time, the activities with which one has become engaged provide new information that can inform the further development of one's expectancies and values.

Previous studies have found that children's expectancies for success are domain specific, since they have been found to differ between math, music, reading, and sports (Wigfield & Eccles, 2000). Furthermore, Eccles et al. (1993) reported that students' expectancies of success were clearly different to their value beliefs, and this distinction applied across each of the domains of math, reading, music, and sports. Other studies have shown that attainment value, interest value, and utility value were clearly distinguished among adolescents, but the distinctions between them were less apparent among children in early elementary years (Wigfield & Eccles, 2000).

Interestingly, it appears that young children have more positive expectancies for success than do adolescents, and this decline applied irrespective of the domain of study (Wigfield et al., 1997). For example, Gråstén, Watt, Hagger, Jaakkola, and Liukkonen (2015) reviewed the

literature on secondary school students' expectancy-value beliefs towards physical education and reported decreases in expectancy beliefs. In addition, Wigfield and Eccles (2000) reported that older children displayed declines in value beliefs compared to younger children. Thus, as children become older during early adolescence their expectancies for success and their value beliefs tend to become more negative, although the reasons for this are not apparent.

However, it is apparent that children's expectancies of success are powerful motivators. Wigfield and Eccles (2000) for example, reported that expectancies for success were the strongest predictors of grades in mathematics, whereas task values were the strongest predictors of future mathematics enrolment. VanZile-Tamsen (2001) reported that expectancy of success was a predictor of self-regulated strategy use among undergraduate students. Eccles (2009) reported that expectancies for success are a strong determinant of one's activity selection. Trautwein et al. (2012) measured expectancy and value beliefs among secondary students and reported that both were positive predictors of achievement. Phelan, Ing, Nyland-Gibson, and Brown (2017) reported that "those students who see themselves as being good at science, or expect to do well ... tend to have higher achievement and participation in science-related activities than those who do not see themselves so" (Ibid, p. 11). According to Wigfield, Tonks, and Lutz Klauda (2009) expectancies and values "are the most immediate or direct predictors of achievement performance and choice" (Ibid, p. 56).

More recent studies however, have revealed that the relationships can vary in different situations, and with different cohorts. For example, Berland and Steingut (2016) reported that task value was the main predictor of effort in maths and science, whereas expectancy for success had little influence. However, Xiang, McBride, Guan, and Solmon (2003) reported that "Children's intention for future participation in physical education was positively associated with their subjective task values and/or expectancy-related beliefs" (Ibid, p. 25). Lawanto and Stewardson (2013) reported that among grades 9-12 students, task value was actually a predictor of expectancy for success in creative design activities. Chen, Martin, Ennis, and Sun (2008) studied elementary physical education and found that expectancy beliefs and task values were higher for a cardiorespiratory fitness unit than a muscular fitness unit. Watt (2004) measured factors such as expectancies for success and task values among students in grades 7-11 and found that "gender differences favoured boys for math and girls for English" (Ibid, p. 1556).

2. The Present Study

As noted above, expectancies and values can play an important role in determining how students approach learning tasks. However, it has been found that secondary students can sometimes be highly motivated to learn but at other times they can appear to be relatively unmotivated. For example, Palmer (2017) reported that some students experienced a dynamic feeling of wanting to learn in a particular lesson, while other students experienced a feeling of not wanting to learn. One issue that has not previously been addressed in the literature is the question of how an individual's expectancies and values might determine whether students are motivated or unmotivated in different lessons at school. The purpose of the present study

is to investigate whether students' expectancies and values differ in situations of wanting to learn compared to situations of not wanting to learn. The research question is,

To what extent do students' expectancies and values differ when students are motivated to learn (i.e., they experience a feeling of wanting to learn) compared to when they are not motivated to learn (i.e., they experience a feeling of not wanting to learn) in normal lessons at school?

3. Method

This study involved individual interviews in which participants were asked to respond to a questionnaire and to provide explanatory statements. Individual interviews were chosen because this would allow the interviewer to confirm meaning with the student thus ensuring the validity and reliability of responses at the time that the interview was carried out. In this way, the study used a mixed methods approach that provided both quantitative and qualitative data.

3.1 Participants

The study involved 24 students who were in grade 10 (i.e., 15-16 year-olds). The students attended three suburban high schools that were located in a medium-sized city in Australia. Eight students participated from each school. The sample included equal numbers of boys and girls and equal number of students from high and low achievement streams. All participants were volunteers.

3.2 Procedure

All data were obtained by individual interviews that were carried out by the author of this paper. Each interview lasted about 20 minutes. Students were asked the following questions:

- 1) *Can you think of a recent lesson in which you experienced a motivated feeling of wanting to learn?*
- 2) *Please describe that feeling.*
- 3) *Was that feeling influenced by any of these factors (shown in Table 1)?*
- 4) *Please explain your responses.*
- 5) *Can you think of a recent lesson in which you experienced an unmotivated feeling of not wanting to learn?*
- 6) *Please describe that feeling.*
- 7) *Was that feeling influenced by any of these factors (shown in Table 1)?*
- 8) *Please explain your responses.*

The items shown in Table 1 included two items representing expectancies (Items, 1 and 4) and three items representing values (Items, 2, 3, and 5 represented attainment value, intrinsic value, and utility value respectively). Students were asked to indicate if each item was a big

positive factor (coded as 5), a small positive factor (coded as 4), a neutral or non-factor (coded as 3), a small negative factor (coded as 2), or a big negative factor (coded as 1) in affecting the feeling of wanting to learn or not wanting to learn. Students' explanatory statements were used to ensure the validity of their responses to these items.

Table 1. Expectancy-Value Items

1. Did you expect to really understand the lesson?
2. Did you expect this lesson to relate to real life?
3. Did you have personal interest in this topic?
4. Did you feel confident in this subject?
5. Did you goals for the future depend on doing well in this class?

3.3 Analysis

Quantitative data were analyzed using paired t-tests. The possibility of a type I error was minimized by reducing the significance level to 1% (0.01). Standard qualitative techniques were used to code the students' explanatory and descriptive statements. This involved the categorizing of student statements into codes that represented different categories of response.

4. Results

4.1 Evidence for Being Motivated or Not Motivated to Learn

In response to the first two interview questions (*1. Can you think of a recent lesson in which you experienced a motivated feeling of wanting to learn? and 2. Please describe that feeling.*) each of the 24 participants were able to bring to mind a recent lesson in which he or she had experienced a positive feeling of wanting to learn. The following are some examples of how they described this feeling:

“I felt good. I wanted to learn this stuff.” (low stream male)

“I definitely wanted to learn what we were doing in that lesson.” (low stream female)

“I wanted to learn because I’m pretty into science.” (high stream male)

“I found it pretty interesting ... because it really appealed to me.” (high stream female)

Conversely, in response to interview questions 5 and 6 (*Can you think of a recent lesson in which you experienced an unmotivated feeling of not wanting to learn? and Please describe that feeling.*) each of the students were able to bring to mind a recent lesson in which he or she had experienced an unmotivated feeling of not wanting to learn. The following were some examples of how they described this feeling:

“I didn’t want to learn because it’s boring.” (low stream male)

“I walked in with a negative attitude and I didn’t want to learn at all in that lesson.”
(low stream female)

“I wasn’t too keen on learning about this stuff.” [Interviewer: *Did you actually want to learn about it?*] “Not really, no.” (high stream male)

“I didn’t want to learn because the teacher doesn’t like me and I just don’t like going to that class.” (high stream female)

In summary, each of the students had recently been in a lesson in which they had experienced a motivated feeling of wanting to learn, and in addition each student had recently been in another lesson in which they had experienced an unmotivated feeling of not wanting to learn. The remainder of the results will focus on comparing the students’ expectancies and values (the data from Table 1) when they were in the lesson in which they had felt motivated to learn compared to the lesson in which they had felt unmotivated to learn.

4.2 Expectancies Items in Table 1

4.2.1 Item 1. Did You Expect to Really Understand the Lesson?

Analysis of the results for this item indicated that a motivated feeling of wanting to learn occurred when students had a significantly $t(23) = 3.795$, $p = 0.0009$, higher expectation that they would understand the lesson (motivated lesson mean = 3.58; SD = 0.78; unmotivated lesson mean = 2.38, SD = 1.24). This implied that a higher expectancy of success was associated with increased motivation for learning. The students’ explanatory statements supported this pattern. For example, one student’s responses were as follows,

Motivated lesson: “When I do get to achieve something, I like the fact that people are actually saying ‘Good job’ and ‘You did well’ ... It makes me want to do more. To get more achievement.”

Unmotivated lesson: “[The teacher] doesn’t make sense – the way he talks. The way he says stuff is really confusing. ... I just don’t understand it, which makes me not want to know about it.”

4.2.2 Item 4. Did You Feel Confident in This Subject?

Analysis of the results for this item indicated that a motivated feeling of wanting to learn occurred when students had a significantly $t(23) = 4.714$, $p < 0.0001$, higher confidence for the lesson (motivated lesson mean = 3.67; SD = 0.76; unmotivated lesson mean = 2.63, SD = 1.01). This implied that higher confidence was associated with increased motivation for learning. The students’ explanatory statements supported this pattern. For example, one student’s responses were as follows,

Motivated lesson: “Just knowing that I’m actually good at that subject makes me happy, which makes we want to learn and understand.”

Unmotivated lesson: “[It was] because I didn’t understand anything. The less you understand the less confident you feel.”

4.3 Values Items in Table 1

4.3.1 Item 2. Did You Expect This Lesson to Relate to Real Life?

Analysis of the results for this item indicated that a motivated feeling of wanting to learn occurred when students had a significantly $t(23) = 3.051$, $p = 0.0057$, higher belief that the lesson would relate to real life (motivated lesson mean = 3.29; SD = 0.95; unmotivated lesson mean = 2.38, SD = 0.88). This implied that a higher attainment value was associated with increased motivation for learning. The students' explanatory statements supported this pattern. For example, one student's responses were as follows,

Motivated lesson: "History is real life anyway. It's recounting all the real life events and listening to people's perspectives ... I found it interesting. It was just an enjoyable class to be with."

Unmotivated lesson: "I'm not interested in that area. ..." [*Interviewer: Did it relate to real life?*] "Not really. Because it's maths there's not a whole lot you can do to relate it to real life."

4.3.2 Item 3. Did You Have Personal Interest in This Topic?

Analysis of the results for this item indicated that a motivated feeling of wanting to learn occurred when students had a significantly $t(23) = 6.511$, $p < 0.0001$, higher personal interest in the topic (motivated lesson mean = 3.75; SD = 1.11; unmotivated lesson mean = 1.83, SD = 0.70). This implied that a higher intrinsic value was associated with increased motivation for learning. The students' explanatory statements supported this pattern. For example, one student's responses were as follows,

Motivated lesson: "Since I've been little I've been interested in these kind of topics. I've always wanted to learn about it."

Unmotivated lesson: "It might have been interesting [to me] in years past but not now."

4.3.3 Item 5. Did Your Goals for the Future Depend on Doing Well in This Class?

Analysis of the results for this item indicated that a motivated feeling of wanting to learn occurred when students had a significantly $t(23) = 3.323$, $p < 0.0030$, higher belief that the lesson did relate to their goals for the future (motivated lesson mean = 3.25; SD = 1.15; unmotivated lesson mean = 2.25, SD = 1.11). This implied that a higher utility value was associated with increased motivation for learning. The students' explanatory statements supported this pattern. For example, one student's responses were as follows,

Motivated lesson: "He asks us what we want to do [in the future] and we say, then he says 'Well, in this job this is what you'll be doing. If you're good at this you'll be good at that'" [*Interviewer: Does that make you like being in that class?*] "Yes".

Unmotivated lesson: "I didn't really like it compared to other lesson. It's the actual topic. I don't see it being a part of my future, so it hasn't interested me from the start."

5. Discussion

The results showed that each student in this study was not only able to bring to mind a recent lesson in which they had experienced a feeling of wanting to learn (i.e., being motivated) but also able to bring to mind another recent lesson in which they had experienced a feeling of not wanting to learn (i.e., being unmotivated). This indicates that these Grade 10 students had experienced considerable variation in their motivation in different lessons. The aim of this study was to investigate students' expectancies and values in each of these situations. The expectation was that if expectancies and values play an important role in the way students approach learning tasks (Wigfield & Eccles, 2000) then we would expect the expectancies and values to significantly differ in each of these situations. This was found to be the case, as follows.

There were two items representing expectancies of success as defined by Wigfield and Eccles, (2000). The first (Item 1) was *Did you expect to really understand the lesson?* The results indicated that when students had a greater expectation that they would understand the lesson they typically reported a positive and motivated feeling of wanting to learn. The difference was highly significant with a probability less than 0.01. The second item representing expectancies of success was *Did you feel confident in this subject?* (Item 4). The results for this item indicated that when students were more confident of success they typically reported a motivated feeling of wanting to learn, and this difference was highly significant, with a probability of less than 0.01. These quantitative results were supported by the qualitative statements from the student interviews, which confirmed that students were more likely to experience a positive feeling of wanting to learn when they were confident and expected to understand the material.

There were three items representing values. Item 2 (*Did you expect this lesson to relate to real life?*) focused on attainment value, which is the importance that the individual attaches to the task (Wigfield & Eccles, 2000). The quantitative results for this item indicated that when students had a greater belief that the lesson related to real life they typically reported a positive and motivated feeling of wanting to learn. The difference was highly significant with a probability less than 0.01. The second values item was Item 3 (*Did you have personal interest in this topic?*) which represented intrinsic value, that is usually defined as the interest or enjoyment that one obtains from a task (Wigfield & Eccles, 2000). The quantitative results for this item indicated that a motivated feeling of wanting to learn was associated with a significantly greater intrinsic value. The difference was highly significant with a probability less than 0.01. The third values item was Item 5 (*Did your goals for the future depend on doing well in this class?*) which represented utility value, because it referred to the relevance of the task to an individual's future goals (Wigfield & Eccles, 2000). The quantitative results for this item indicated that a motivated feeling of wanting to learn was associated with a significantly greater utility value. Once again, the difference was highly significant with a probability less than 0.01. These quantitative results were supported by the qualitative statements from the student interviews, which confirmed that students were more likely to experience a positive feeling of wanting to learn when they perceived the material as having higher attainment value, intrinsic value, and utility value.

In summary, the findings for Items 1 and 4 implied that a higher expectancy of success was associated with increased motivation for learning, and the findings for Items 2, 3, and 5 implied that when value beliefs are higher, then students are more likely to experience a higher motivation for learning. In this way, the present study has supported the findings from previous studies that have suggested that expectancies of success and value beliefs can play a major role in influencing motivational outcomes (Wigfield & Eccles, 2000).

This study has made a significant contribution to the literature on expectancy-value theory. First, the present study measured expectancies and values at a lesson-specific level whereas most previous studies have measured these beliefs at the domain-specific level, rather than focusing on particular lessons within those domains (Wigfield & Eccles, 2000). Furthermore, the present study has indicated that students' expectancies and values in relation to particular lessons can vary markedly from one lesson to another, and as a result, students can be highly motivated in one lesson but poorly motivated in another. This is significant because previous authors such as Gråstén, Watt, Hagger, Jaakkola, and Liukkonen (2015) have reported that expectancies generally decline during adolescence, but the present study has suggested that, among these 15-16-year-old students, there can be strong variation from one lesson to another, so this decline should not be regarded as applying equally to every lesson.

6. Conclusions and Directions for Future Research

The first conclusion arising from the study is that student expectancies and values can vary markedly from one lesson to another. In this way, the study has provided evidence in support of previous authors such as Chen, Martin, Ennis, and Sun (2008) who reported that expectancy and value beliefs can vary from one context to another. This is an important conclusion because it reinforces the importance of considering particular educational contexts of expectancy and value, rather than treating them as global constructs. Further research is needed to determine whether the previously reported declines in expectancies and values throughout adolescence might apply more strongly to some types of lessons rather than others.

The second conclusion is that the expectancy and value beliefs about particular lessons are closely associated with the type of motivated feeling that students experience in that lesson. When students have highly positive expectancies and values about a particular lesson they will be more likely to experience a positively motivated feeling of wanting to learn, but when students have lower expectancies and values about a lesson then they will be more likely to experience a negatively motivated feeling of not wanting to learn. This is an important finding because it has previously been suggested that expectancies and values are the most immediate or direct predictors of achievement performance and choice (Wigfield, Tonks, & Lutz Klauda, 2009), but in particular lessons, it is possible that expectancies and values play their role by determining the extent to which students experience a motivated feeling of wanting to learn, or an unmotivated feeling of not wanting to learn. Further research is needed to determine whether it might be this motivated or unmotivated feeling that has the most direct influence on student performance and choice.

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