

Readiness Quizzes as Adjuncts to Ensure Gateway Class Success

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[Abstract]

Change is required with regard to the teacher's role in gateway English as a second language and English as a foreign language classes. To function effectively, the teacher must provide salient instruction and foster a milieu that emphasizes excellence and failure prevention. An argument has been raised that neither can this task be performed single-handedly nor is it fair to foist such an expectation on the teaching staff. Reaching out to high-risk students requires implementing new and creative methods. The Cross Departmental English Program at Hokusei Gakuen University mobilized to increase awareness of the needs of high-risk students. Two items were introduced: a readiness quiz for students regarding the course structure and goals and a different readiness quiz for teachers to reinforce the program goals. The data were derived from the readiness quiz scores, weekly activities, and student midterm readiness. Assessing the midterm readiness was contingent upon the students lifting all the restrictions with regard to the review quizzes and unit tests. The participants who, at regular intervals, accomplished the preparation and review quizzes were compared against those who did not. The information derived from this study will help teachers keep their students on track, especially the at-risk learners, and prevent their students from falling behind in such a manner that failure is their only option.

Research Statement

This research explores how the CEP or Cross Departmental English Program at Hokusei Gakuen University utilized its limited resources to raise awareness during the annual teacher orientation meeting for the benefit of a growing at-risk population within the student body. Two items were introduced 1) a readiness quiz for students about the course structure and goals, and 2) a different readiness quiz teachers to reinforce program goals and policy. How these quizzes influenced teacher and student behavior is the basis for data collection, interpretation, and implication for the future use of readiness quizzes.

Key words : E-learning, Pedagogy, Moodle, ESL/EFL,
Syllabus Design/Course Design/Readiness Awareness

The Context

Innovative change is needed with regard to expanding the teacher's role in gateway ESL /EFL classrooms. A Gateway Class is an entry-level college course where students build upon their college-ready standards acquired in high school. Such a class is to be affirming and positive. Faculty need to see the students create links between what they learned in high school to the local institutional standards so as to keep degree and credential completion at the postsecondary level as a primary goal, and foster peer based collaborative learning as opposed to learning in isolation. (Berry, Cook, et. al. 2013) In countries where populations are in decline coupled with a concurrent drop in skill-set levels, teachers may find themselves to be, increasingly so, counselors. Such are vitally important in ensuring future success within the university and beyond.

To function effectively, the teacher, in addition to providing salient instruction, needs to foster a milieu that emphasizes, not just excellence, but prevention of failure among students. How can teachers make such identifications so as to prevent alienation and failure? By examining an institution's DFWI, otherwise know as Dropout, Failure, and Withdraw rates, it is argued that this task cannot be done single-handedly, nor is it fair to foist such expectations upon the teaching staff. Within most academic contexts, a DFWI rate of 30% or more is considered high and in need of intervention. While the local context under consideration is well under such a mark, a population of at risk students, however small, is nonetheless an ever-present concern for consideration. Such a group is all too often relegated as not worthy of careful, critical attention for positive intervention.

Awareness Raising with Readiness Quizzes

Reaching out to high-risk students needs to take on new and creative forms. Raising awareness during the annual teacher orientation meeting of a growing at-risk population within the student body, led to an increased agreement about the benefits of a readiness quiz about the course structure and goals, and a different readiness quiz teachers for topic fluency and reinforcement. Weinstein and Wu, (2009), suggest two approaches with students, each with observable benefits. Readiness Quizzes (RATs) are useful for establishing rules and expectations, not necessarily course content learning, but rather an external motivator. A more frequent weekly quiz schedule contributes greatly to learning and reinforcing course goals and expectations will serve to re-circulate newly acquired information, an internal motivator.

Data Collection

Efforts in supporting both teachers and students to this end happened within a moodle environment. The data derived from a mosaic of integrated sources:

- 1) Readiness Quiz scores,
- 2) Week by week performance on scheduled online activities – Preparation and Review Quizzes, and
- 3) Students ready for their midterm exams.

Teachers are required to follow a complex syllabus that emphasizes a flipped learning environment. Such includes namely Preparation Quizzes that need to be done before Review Quizzes and then Unit Tests (technically optional, but may be used as material for mid-term tests).

Syllabus Plan for English 1 & 2

Unit 1 (授業 In-class · 復習 Review)

Unit 2 (準備学習 Preparation · 授業 In-class · 復習 Review)

Unit 3 (準備学習 Preparation · 授業 In-class · 復習 Review)

Mid-term 1 (中間テスト1 Mid-term 1) (Goetz: 2017)

Method

Within the moodle environment, accessing the Unit Tests on mid-term day is contingent upon students having lifted all restrictions connected with accessing Review Quizzes and the Unit Tests, which, in part, comprise the midterm exam. Those students who, at regular intervals, accomplished the Preparation and Review Quizzes were compared against those who did not.

Findings

The case is often made in favor of a more distributed and frequent the contact the learner has with the target language, the greater the likelihood that motivation will be maintained, interest will endure, and acquisition will be long-lasting. To this end, preliminary findings appear to confirm this assertion.

Readiness Quiz scores

The intent of the student Readiness Quiz was to reinforce expectations. It was designed to be easy.

The average RQ scores were high.

World Link Book 1: $\bar{X} = 9.64, N = 94$

World Link Book 2: $\bar{X} = 9.42, N = 58$

World Link Book 3: $\bar{X} = 9.69, N = 50$

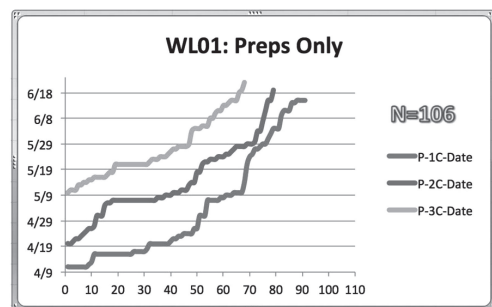
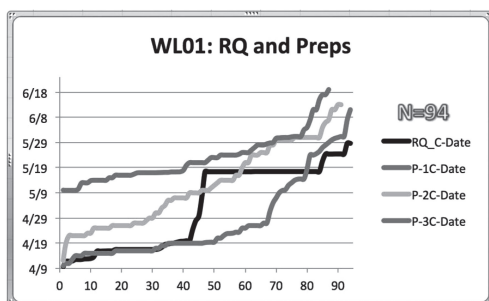
WL refers to the group of students using World Link Books 1, 2, and 3 respectively.

Readiness Quiz behavior

It was noticed that some students would start the Readiness Quiz, only to abandon it, completing it later in a formal environment. Such cases were regarded taking the RQ on the day of completion in that they were most likely paying most attention to its content when they were finishing it. In the future a time limit is to be placed on the quiz, ie., 30 minutes. In this manner, should a student abandon the quiz, then the attempt automatically times out, saving the data.

Weekly Look : Preparation and Review Quiz behavior with and without use of the Readiness Quiz.

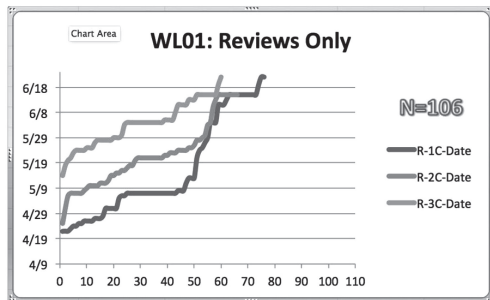
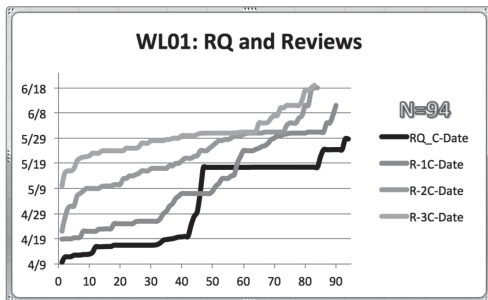
World Link Book 1 : Preparation Quizzes



RQ_C : Review Quiz Completion Date
 P-1C : Preparation Quiz 1 Completion Date
 P-2C : Preparation Quiz 2 Completion Date
 P-3C : Preparation Quiz 3 Completion Date

P-1C : Preparation Quiz 1 Completion Date
 P-2C : Preparation Quiz 2 Completion Date
 P-3C : Preparation Quiz 3 Completion Date

World Link Book 1 : Review Quizzes

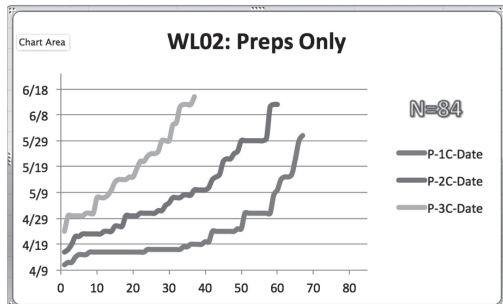
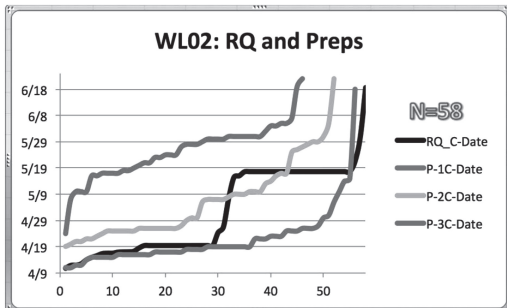


RQ_C : Review Quiz Completion Date
 R-1C : Review Quiz 1 Completion Date
 R-2C : Review Quiz 2 Completion Date
 R-3C : Review Quiz 3 Completion Date

R-1C : Review Quiz 1 Completion Date
 R-2C : Review Quiz 2 Completion Date
 R-3C : Review Quiz 3 Completion Date

Students who took the Readiness Quiz appear to have a gentler gradation thus suggesting that the Readiness Quiz may have been a positive contributing factor in finishing their Preparation and Review Quizzes on a more timely basis when seen against their peers who did not take the Readiness Quiz. This applies to World Link Book 1.

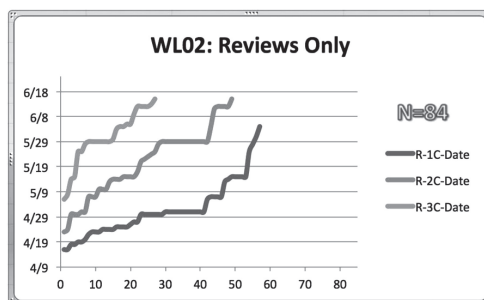
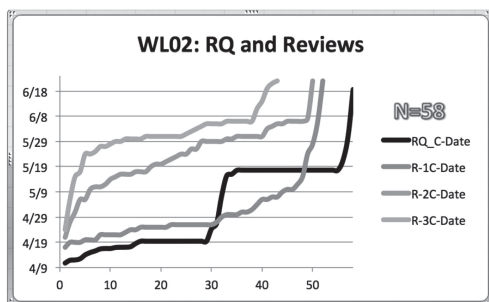
World Link Book 2 : Preparation Quizzes



RQ_C : Review Quiz Completion Date
 P-1C : Preparation Quiz 1 Completion Date
 P-2C : Preparation Quiz 2 Completion Date
 P-3C : Preparation Quiz 3 Completion Date

P-1C : Preparation Quiz 1 Completion Date
 P-2C : Preparation Quiz 2 Completion Date
 P-3C : Preparation Quiz 3 Completion Date

World Link Book 2 : Review Quizzes

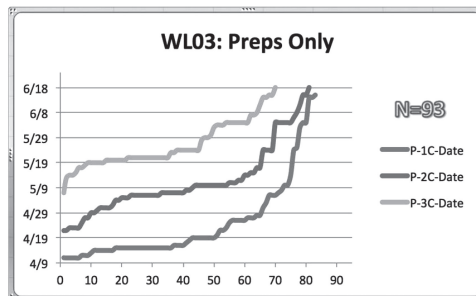
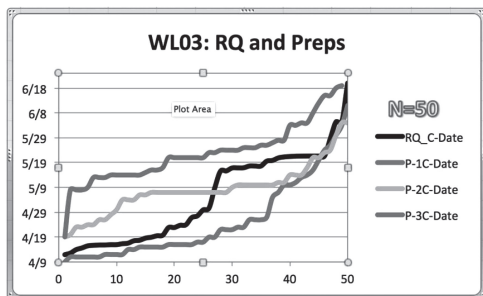


RQ_C : Review Quiz Completion Date
 R-1C : Review Quiz 1 Completion Date
 R-2C : Review Quiz 2 Completion Date
 R-3C : Review Quiz 3 Completion Date

R-1C : Review Quiz 1 Completion Date
 R-2C : Review Quiz 2 Completion Date
 R-3C : Review Quiz 3 Completion Date

Students who took the Readiness Quiz appear to have a gentler gradation thus suggesting that the Readiness Quiz may have been a positive contributing factor in finishing their Preparation and Review Quizzes on a more timely basis when seen against their peers who did not take the Readiness Quiz. Note: some were even initiating all 3 units within the first two weeks. Such cannot be said for students in classes where the teacher did not use the Readiness Quiz. This applies to World Link Book 2.

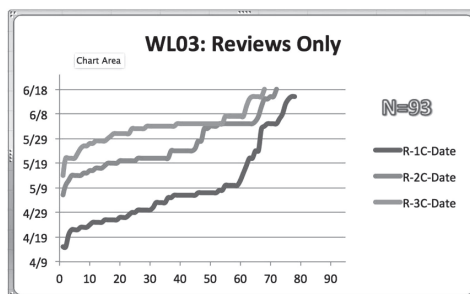
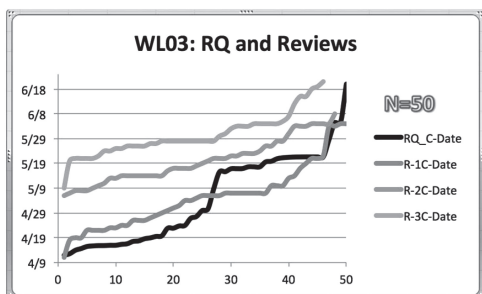
World Link Book 3 : Preparation Quizzes



RQ_C : Review Quiz Completion Date
 P-1C : Preparation Quiz 1 Completion Date
 P-2C : Preparation Quiz 2 Completion Date
 P-3C : Preparation Quiz 3 Completion Date

P-1C : Preparation Quiz 1 Completion Date
 P-2C : Preparation Quiz 2 Completion Date
 P-3C : Preparation Quiz 3 Completion Date

World Link Book 3 : Review Quizzes



RQ_C : Review Quiz Completion Date
 R-1C : Review Quiz 1 Completion Date
 R-2C : Review Quiz 2 Completion Date
 R-3C : Review Quiz 3 Completion Date

R-1C : Review Quiz 1 Completion Date
 R-2C : Review Quiz 2 Completion Date
 R-3C : Review Quiz 3 Completion Date

Students who took the Readiness Quiz appear to have a gentler gradation thus suggesting that the Readiness Quiz may have been a positive contributing factor in finishing their Preparation and Review Quizzes on a more timely basis when seen against their peers who did not take the Readiness Quiz. This applies to World Link Book 3.

Discussion

On the whole, a quick visual shows that the students who did the Readiness Quiz tended to do their Preparation and Review quizzes on more of a weekly basis. Those students who did not were more likely to wait until the midterm. This raises the question if there is a correlation between those who took the Readiness Quiz and their weekly performance on the Preparations and Reviews. To what extent, however, is this observation significant?

Results

Pearson Correlation Coefficient

Result Details & Calculation

X Values
 $\Sigma = 172.5$
 Mean = 4.792
 $\Sigma (X - M_x)^2 = SS_x = 826.81$

Y Values
 $(X - M_x)^2 \& (Y - M_y)^2$: Deviation Squared
 $(X - M_x)(Y - M_y)$: Product of Deviation Scores
 $\Sigma = 3236.5$

Mean = 89.903
 $\Sigma (Y - M_y)^2 = SS_y = 965.704$

X and Y Combined
 $N = 36$
 $\Sigma (X - M_x)(Y - M_y) = 292.473$

R Calculation : 0.3273.

Although technically a positive correlation, the relationship between the variables is weak, the nearer the value is to zero, the weaker the relationship. The value of R^2 , the coefficient of determination, is 0.1071. The main point is that students are doing their work according

to teacher approval. In addition to the Readiness Quiz, students talk to each other and benefit from other methods, teacher reminders and the like.

ANOVA Application

Significant variance was evident when Unit Tests were used as midterms. 6 Groups were compared within a One-Way Analysis of Variance, testing for the null hypothesis. All student scores for their Preparation and Review quizzes were combined and averaged out at the book level. Two macro groups were: 1) those students whose teachers made use of the Unit Tests and 2) those who did not.

One-Way Analysis of Variance : Data Summary

Data Summary				
Groups	N	Mean	Std. Dev.	Std. Error
Group 1	58	55.6278	37.4421	4.9164
Group 2	57	85.1944	16.3773	2.1692
Group 3	32	62.4794	30.1474	5.3294
Group 4	32	86.3422	16.7147	2.9548
Group 5	63	69.0019	34.9912	4.4085
Group 6	82	90.601	20.8356	2.3009

Group1 WL01 : With Unit Tests
Group2 WL01 : Without

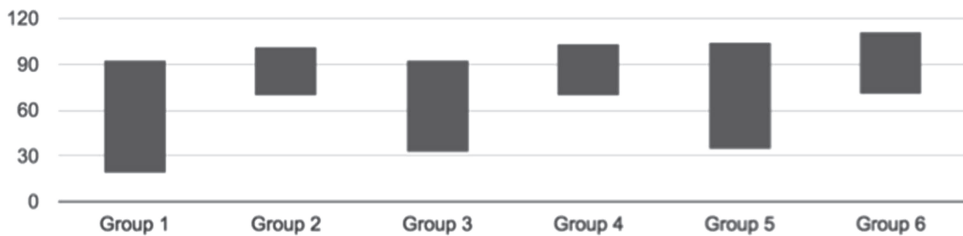
Group3 WL02 : With Unit Tests
Group4 WL02 : Without

Group5 WL03 : With Unit Tests
Group6 WL03 : Without

One-Way Analysis of Variance : ANOVA Summary

ANOVA Summary					
Source	Degrees of Freedom	Sum of Squares	Mean Square	F-Stat	P-Value
	DF	SS	MS		
Between Groups	5	58729.5291	11745.9058	15.3813	0
Within Groups	318	242840.3799	763.649		
Total:	323	301569.909			

One-Way ANOVA : Average Standard Deviation



Group1 WL01 : With Unit Tests
Group2 WL01 : Without

Group3 WL02 : With Unit Tests
Group4 WL02 : Without

Group5 WL03 : With Unit Tests
Group6 WL03 : Without

Even from this visual, one can see a difference as nearly self-evident.

Analysis of Variance Results

F=15.38129, P=0, Significant @ $p < .01$.

Discussion

With no meaningful correlation and a significant ANOVA, we have an “Alpha and Omega” situation. In other words, if the Readiness Quiz is to be effective, the teacher needs to follow through by employing Unit Tests as midterms. Or, colloquially, you can’t have one without the other. This confirms the two findings made by Weinstein and Wu (2009). That way, students are more likely to be more in sync with syllabus expectations and in a better position to apply their acquired knowledge to their entry level gateway course. As for how the teachers were affected by their readiness quiz, Given the student population sizes from those who did and did not take their Readiness Quiz, one can see that about half of the teachers saw little or no value in utilizing the Student Readiness Quiz and Unit Tests as material for midterms on a consistent basis.

Implications for Instruction

The Readiness Quiz footprint needs to expand for both teaching staff and students. For students, the RQs need to be placed at the top of their list of quizzes for an entire semester. In other words, before they can access any of the Preparation or Review Quizzes, students need to take can pass the Readiness Quiz. One might consider retaking the Readiness Quiz in the event of poor performance together with a possible meeting with school counselors.

Summary

It is hoped that the information derived will assist teachers in keeping their students on track and minimizing the Gateway Class Drop, Failure, and Withdraw (DFWD) rate, but especially the at-risk learners, from falling so far behind that course repetition is their only option.

Building teacher awareness during annual orientation, requiring student Readiness Quizzes, and follow up with comprehensive midterms (Unit Tests) need to be seen as a unified whole in forming a bridge not only for the classroom level learner, but at the program level. With the expectation that frequent contact with the salient material is *de rigueur* and part and parcel needs to become part of the overall culture of learning as defined by the larger institution.

Sources

Aligning Gateway College Courses, cited on 6/17/2018, <https://education-first.com/wp-content/uploads/2015/10/05-Higher-Ed-Alignment-Brief-Gateway-Courses.pdf>

Berry, Cook, et. al., Success in Gateway Business Courses: What Matters and What Can We Do? *Journal of Learning in Higher Education*, v 9 n 1 p 19-24 Spring 2013

Goetz, Thomas H., Readiness quizzes for a moodle environment, *Hokusei Gakuen University Ronshu, Social Welfare*, No., 55, 127-136, March 2018.

<https://goodcalculators.com/one-way-anova-calculator/>

Koch, and Pistilli, Analytics and Gateway Courses: Understanding and Overcoming Roadblocks to College Completion, 2012, https://www.insidehighered.com/sites/default/server_files/files/Analytics%20and%20Gateway%20Courses%20PPT.pdf

<http://www.socscistatistics.com/tests/pearson/Default2.aspx>

Stempleski, S. et. al., *World Link Book 1*, 2nd edition, New York: Cengage Learning, 2011.

Stempleski, S. et. al., *World Link Book 2*, 2nd edition, New York: Cengage Learning, 2011.

Stempleski, S. et. al., *World Link Book 3*, 2nd edition, New York: Cengage Learning, 2011.

Weinstein and Wu, Readiness Assessment Tests versus Frequent Quizzes: Student Preferences, *International Journal of Teaching and Learning in Higher Education* 2009, Volume 21, Number 2, 181-186.