Article

A Study of Students Perceived Predictability of Kankor Examination and Relationship with Kankor Score

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Abstract

Kankor examination is a high-stake examination since its results can have a significant influence on a student's socio-economic life in the long term. Every year, hundreds of thousands of students appear in exams with the hope to secure good marks. In this study, we investigate the student's perception regarding the Kankor examination in terms of predictability features. Three aspects of predictability were investigated including blatant predictability, format predictability, and subtle predictability. Primary data is collected from 119 survey participants who were selected on a convenience non-random basis. Results show that participants had above the medium level of perceived predictability towards the Kankor examination. Regression results show that format predictability ($β=31.668$, $P<.05$) and subtle predictability ($β=21.13$, $P<.05$) had positive and significant positive effects on Kankor examination score secured by students. The three predictability dimensions explained 68.3% change in the Kankor examination score. Results imply that student needs to familiarize themselves with Kankor format, type of questions, curriculum range in order to enhance their chances of securing good marks in Kankor examination.

Keywords: Kankor, Examination, Predictability, Score, Afghanistan

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Introduction

In Afghanistan the Kankor examination is a university-level entry exam taken after completion of secondary schooling. The test result is used to allocate students to various universities and different programs based on their results. Every year, almost two hundred and fifty thousand students appear in the exam. In this context, the Kankor can be considered as a high-stakes test since its results have a direct association with students' future career, earning, and development (Berry, 2011). In this study, the focus is on understanding the student's perception of predictability of Kankor examination and its influence on their Kankor score.

Understanding examination predictability and its influence on students' outcomes such as exam scores is limited. There are fewer studies conducted on this topic and even these studies are Western Context Furthermore, these studies show mixed results. For example, one stream of studies shows that exam predictability increases transparency, reduces student uncertainty, and positively influences student's exam performance such as exam score (e.g. Baird, Caro, & Hopfenbeck, 2016; Byrne & Willis, 2004). The other stream of studies shows that predictability decreases test validity, increase exam content centered teaching, rote learning, cheating practices, and negatively influence student's exam performance such as exam score (Reiter, Salvatori, Rosenfeld, Trinh, & Eva, 2006; Wilkinson, Fontaine, & Egan, 2003; Powers & Fowles, 1998). Based on these two extreme results and viewpoints, an investigation was needed regarding the predictability and exam performance in the context of Kankor examination in Afghanistan.

1.1 Problem Statement

The main problem which this study is investigating is that there is a low understanding of the predictability of the Kankor examination and its relationship with students' outcomes. Furthermore, from a student's perspective, Kankor examination is a highly important event in their life since it can change their entire socio-economic life provided they secure a good score in the Kankor examination. On the other hand, if a student performs poor in the Kankor exam, it can have negative effects on the career and life of that student. Thus, Kankor examination becomes a crucial turning point for students; something which creates a lot of stress on students. This stress can be reduced if students have a better understanding of the Kankor exam format, nature of questions, and curriculum range in advance. Therefore, the predictability of the Kankor exam becomes important in this local context. So far, there is no single study in Afghanistan that investigate the extent of perceived predictability

or its influence on students' outcomes related to the Kankor examination. It is this literature gap which this study intends to fulfill.

1.2 Significance of the Study

The significance of the study is that theoretically it fills the literature gap by investigating the predictability aspect related to the student scores in Kankor examination in Afghanistan. The findings can be useful for policymakers, students, and educational institutes providing Kankor preparation coaching.

1.3 Objectives of the Study

The objectives of the proposed study are as follows:

- To investigate student's views about the predictability of Kankor exams in Afghanistan.
- To test the relationship between perceived blatant predictability and students Kankor exam score
- To test the relationship between perceived format predictability and students Kankor exam score
- To test the relationship between perceived subtle predictability and students Kankor exam score

2 Literature Review

Predictability of high-stakes exams refers to matching between exam questions and the curriculum and student's ability to predict exam questions in advance (Ofqual, 2008). Predictability of exams such as Kankor which is a high-stake exam is important since it leads to the development of motivation and learning among students (Byrne & Willis, 2004). The other benefit of examination predictability is that it ensures the structured educational experience for students (Baird, et al., 2016). In several countries, the material of high-stake exams such as GCSE and A-level is easily available for the public. These materials include test-taking regulations, marking schemes, past test papers. The wider availability of such material reduces the secrecy of such exams and ensure greater transparency and confidence placed in the system (Powers & Fowles, 1998). Some experts suggest that there must be high alignment between the taught curriculum and high-stake exams in order to enhance test effectiveness (Darling-Hammond, 2010). However, the downside is that based on such predictability, teachers often focus on only those aspects of the curriculum which are predicted to appear in high-stake exams such as Kankor (Madaus, Russell, and Higgins, 2009). The positive effect of transparent and widely available assessment criteria for high-stake exams is that it enables students to well-in advance about their capacity using

some method of self-assessment. However, the downside of transparency is that it can decrease the validity of student's performance in the future based on predictable exams (Torrance, 2007). Thus, at one hand, transparency is required based on high predictability; while, on the other hand, some fairness in the system is required as over-transparency can decrease the efficiency and predictability of future performance of students in various professional fields. Based on such critique, further investigation is required as to how students and teachers prepare for the Kankor examination which can be closely aligned with the stakeholder's view. Literature also suggests that there are three types of predictability including blatant predictability; format predictability, and subtle predictability. In this study, the focus will be on all three types of predictability. Their brief details are as follows;

2.1 Blatant Predictability

Blatant predictability refers to the student's prior knowledge about the type of questions that will be present in the high-stake tests (Powers & Fowles, 1998). In the proposed study context, the blatant predictability is about student's prediction of the type of questions and the nature of questions that will be present in the Kankor exam. Having such knowledge is highly important since it can help students in understanding what type of preparation, they need such as type of books or material which need to be given greater emphasis. Previous studies also emphasized that student's blatant predictability can influence students' results (e.g. Reiter, et al. 2006). There is some disagreement as few other studies reported that such prior knowledge (blatant predictability) is not significantly related to students' results (e.g. Wilkinson, et al., 2003). Overall, if we look at the Kankor exam so it is quite unpredictable and as a result, it may increase transparency but also the difficulties and demotivation for students to prepare for the Kankor exam.

2.2 Format Predictability

Format predictability is the second type of predictability and refers to the student's prediction about the nature of questions and its format in advance. The advantage of format predictability is that it increases student's confidence, time management, and help in preparation for such an exam. Some studies reported higher benefit of format predictability based on re-testing (Arendasy & Somer, 2013); however, other studies show marginal improvement of format predictability based on test-retest situation (Hausknecht, Halpert, Di Paolo, & Gerrard, 2007). Furthermore, studies also suggest that format predictability and its association with exam results are very much based on individual cognitive ability and the

nature of the subjects or tests as well (Arendasy & Somer, 2013; Hausknecht, et al., 2007).
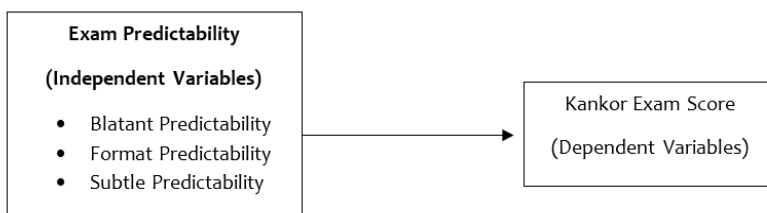
2.3 Subtle Predictability

The subtle predictability is about student's ability to judge in advance the type of preparation required for the high-stake exams (Freund & Holling, 2011). The work of Anastasi (1981) suggests that the subtle predictability is not in favor of students as it reduces the student's preparation for broader areas and thus can reduce the test validity. By test validity, it means that maybe a student based on subtle predictability prepares well for the exam and score well on exam but may not be a good performer in other areas or future endeavors. Volante (2004) suggests that subtle predictability is required and does not influence students' cross-contextual performance. Regardless of the debate about subtle predictability, it can be argued that in the local context of Afghanistan, the subtle predictability can be useful for students as it reduces associated uncertainty.

2.4 Infuence of Exam Predictability on the Kankor Exam Score

Previous studies evidence suggest mixed results related to the relationship between higher perceived exam predictability and exam score. For example, a study by Baird, et al., (2016) shows that in high-stake examinations in Ireland, the perceived predictability including valuable learning, predictability, and narrowing of the curriculum had a significant relationship with examination score or outcomes. Byrne and Willis (2004) study showed that highly predictable exams led to higher scores but leaded students to do rote learning. Contrary to these findings, a study by Powers and Fowles (1998) showed that exam contents predictability brings no change in students' exam performance. Similarly, Wilkinson, et al., (2003) showed that predictability due to the examination security breaches did not bring many changes in examination results. Another study by Reiter, et al., (2006) showed that predictability due to the release of exam questions did not bring much change in students' results. Overall, the studies related to the predictability and exam performance relationship shows mixed results.

3 Theoretical Framework and Hypotheses of the Study

Source: Author's Compilation

Based on the previous studies, we propose the following theoretical model.

Our hypotheses are as follows;

H0: Blatant predictability has insignificant effects on Kankor exam score

H1: Blatant predictability has significant effects on Kankor exam score

H0: Format predictability has insignificant effects on Kankor exam score

H2: Format predictability has significant effects on Kankor exam score

H0: Subtle predictability has insignificant effects on Kankor exam score

H3: Subtle predictability has significant effects on Kankor exam score

4 Research Methodology

4.1 Research Design

The design of the study is a cross-sectional survey-based. In terms of the research approach, the chosen research approach is quantitative. Cross-sectional research design means data collection is done once and the quantitative approach means the measurement of variables quantitatively and making use of statistical techniques for data analysis.

4.2 Participants

The participants of the study are the students who participated recently in the Kankor exam and got their results. Every year, almost, 250,000 students appeared in the exam all over the country. However, the figure is much lower in Kabul Province alone.

4.3 Sampling

The population of the study is all students who have appeared in the Kankor exam in Kabul province alone. Based on the large population, we used convenience non-random sampling. Using the sample size calculator by Bartlett, Kotrlik, and Higgins (2001), the required sample size is 119 based on .05 alpha level and .03 margin of error.

4.4 Survey Measure

The independent variables were measured by a scale developed by Caro and Hopfenbeck 2014 called 'The Student Experience of Exam Predictability Scale'. The original scale consisted of 11 items, however, we used 8 items. Blatant predictability is measured by 3 items; format predictability is measured by 3 items; and subtle predictability is measured by 2 items. The dependent variable is the Kankor examination score which is the actual score received by students during their last examination attempts.

4.5 Data Collection

Data is collected using research assistants who distributed the survey among potential participants. The criteria for inclusion were students who appeared in the Kankor examination during the last 1 year. A total of 167 surveys were distributed out of which 119 were returned making a response rate of 71.2%. All surveys were distributed in the Kabul province alone. Some of the surveys were filled online as well.

4.6 Method of Analysis

The method of analysis is quantitative and the techniques used for analysis include descriptive statistics, correlation analysis, and regression analysis. The software for the analysis is SPSS version 20.

4.7 Ethical Considerations

We followed the accepted ethical norms for dealing with human subjects while conducting this study. No harm or force is used to push students to participate in the survey. All participation is voluntary. No student is forced to give their identity or any personal information. All the data collected is used for the purpose of this study analysis and no information is handed over to any other party.

5 Results

5.1 Demographic Information

The demographic information of the survey participants are provided below.

Table 1: Demographic Information

	Frequency	Percentage
Gender		
Male	81	68.1%
Female	38	31.9%
Ethnicity		
Pashtun	31	26.1
Farsiwan	41	34.5
Hazara	12	10.1
Uzbek	11	9.2
Others	24	20.2

Source: Date output from SPSS

There was a total of 119 participants in our survey. Out of the total, 81 participants (68.1%) were male and 38 were female (31.9%). In terms of ethnicity, 31 participants were Pashtuns (26.1%); 41 participants were Farsiwan (34.5%); 12 were Hazara (10.1%); 11 were Uzbek (9.2%); and 24 belonged to the other category (20.2%).
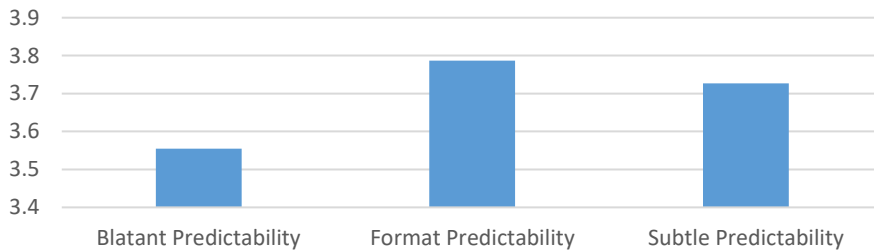
5.2 Descriptive Statistics

The descriptive statistics are provided below.

Table 2: Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation
Blatant Predictability	1.67	5.00	3.5546	.99649
Format Predictability	1.67	5.00	3.7871	.79159
Subtle Predictability	2.00	5.00	3.7269	.68503
Score	160.00	340.00	246.0504	46.46793

Source: Date output from SPSS

Figure 1: Descriptive Statistics

Source: Table 2

The descriptive statistics indicate that our survey participants had above average perceived blatant predictability (M=3.55, SD=.99); above-average perceived format predictability (M=3.78, SD=.79); and above-average subtle predictability (M=3.72, SD=.68). The minimum Kankor score obtained by our participant was 160 and the maximum Kankor score was 340 with a mean value of 246.05.

5.3 Correlation

Correlation analysis is provided below.

Table 3: Correlation

		1	2	3	4
Blatant Predictability	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	119			
Format Predictability	Pearson Correlation	.757**	1		
	Sig. (2-tailed)	.000			
	N	119	119		
Subtle Predictability	Pearson Correlation	.604**	.603**	1	
	Sig. (2-tailed)	.000	.000		
	N	119	119	119	
Kankor Score	Pearson Correlation	.662**	.781**	.674**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	119	119	119	119

*** Correlation is significant at the 0.01 level (2-tailed).*
Source: Date output from SPSS

The correlation analysis indicates that all three dimensions of predictability were positively associated with Kankor score including blatant predictability (r=.662, P<.05); format predictability (r=.781, P<.05); and subtle predictability (r=.674, P<.05).

5.4 Regression Analysis

The regression analysis results are provided below.

Table 4: Regression Analysis

Variable	Model 1	Model 2
Constant	239.718	29.961
Gender (Male)	6.160	7.879
EthnicityDummy1 (Pashtun)	-3.009	.527
EthinicityDummy2 (Farsiwan)	8.486	2.507
BlatantPredictability		3.104
FormatPredictability		31.668***
SubtlePredictability		21.134***
R	.123	.826
Rsquare	.015	.683
Adjusted Rsquare	-.011	.666
Fstat	.590	40.226***

*P<0.05, **P<0.01, ***P<0.0001
Source: Date output from SPSS

Independent Variables= Blatant Predictability, Format Predictability, Subtle Predictability

Control Variables= Gender (1 for Male, 0 otherwise), Ethnicity Dummy1 (1 for Pashtun, 0 otherwise), Ethnicity Dummy2 (1 for Farsiwan, 0 otherwise)

Dependent Variable= Kankor Examination Score

Regression analysis is provided in the table above. We used model 1 for testing the effects of control variables only, and model 2 for testing the effects of our independent variables on the dependent variable of the Kankor score. Results indicate that when controlling for gender and ethnicity, blatant predictability brings positive but insignificant effects on the Kankor score (β=3.10, P>.05). Furthermore, format predictability (β=31.668, P<.05) and subtle predictability (β=21.13, P<.05) is found to be producing positive and significant effects on students Kankor score. The R-square for model 2 shows that independent variables when controlling for gender and ethnicity explains 68.3% change in the dependent variable of Kankor score. The F-statistics indicate that the model is fit and significant (Fstat=40.22, P<.05). Based on our results, we accept H2 and H3, while rejecting H1. It can be concluded that format predictability and subtle predictability bring a positive influence on students' Kankor score.

6 Discussion

The prime aim of the study was to identify the student's perceived predictability of the Kankor examination and its influence on students' Kankor examination scores. The study was conducted in Kabul province only and utilized a cross-sectional survey design. A total of 119 participants were part of the survey. Results show that among participants, there is above the medium level of perceived predictability of Kankor examination including blatant, format, and subtle predictability. Furthermore, correlation results indicate that three dimensions of predictability including blatant, format, and subtle predictability have a positive and significant correlation with the Kankor examination score. Regression results indicate that gender and ethnicity do not bring many significant effects on the Kankor examination. Furthermore, format and subtle predictability produces positive and significant effects on Kankor examination; while, results for the blatant predictability turned out to be positive but insignificant. The results are comparable with previous studies which also stated the positive influence of exams predictability on exam score and other student outcomes. For example, a study by Baird, et al., (2016) reported a positive influence of exam predictability on exam scores. Similarly, a study by Byrne and Willis (2004) showed a positive influence of exam predictability on exam scores obtained by students. In Afghanistan local context, the findings signify that students need to be well aware of the exam including its format, range of curriculum from which questions are derived, and the nature of questions that can possibly come up in the exam. Having such knowledge in advance can improve students' chances of getting a good score in the Kankor examination which leads to other favorable outcomes such as securing a position in public sector university and successful career progression.

7 Conclusion

On the basis of the study findings, it can be concluded that Kankor is a moderately predictable exam. Furthermore, it can also be concluded that with some efforts, students can enhance their predictability of the Kankor exam in terms of its format, questions nature, and important curriculum areas that are used for developing the questions. On the basis of the study, it can also be concluded that blatant, format, and subtle predictability is in favor of students as it can lead to improved Kankor examination. On the basis of the results, we also conclude that Kankor is a memory-based exam and promote rote learning among students while compromising on higher-order learning such as analysis and critical review.

8 Recommendations

Owing to the discussion and the conclusion of the study above, following recommendations are made;

The first recommendation is for students who wish to appear in the Kankor examination. These students need to prepare in such a manner that they need to get themselves well aware of the format, type of questions, and key curriculum topic which form the basis of the question's formation. By increasing their predictability about exams, the students can reduce their stress and also enhance their chances of getting a better score in the Kankor examination.

The second recommendation is for academic institutes that provide professional coaching/ training to students for Kankor preparation. These institutes need to design coaching in such a manner that increases students' predictability about questions nature, format, and curriculum range. Mockup tests can also be helpful in this regard.

The third recommendation from a policy point of view is that the Kankor examination needs to be modified in order to boost higher-order learning among students compare to memory or lower-order learning.

9 Limitations

Limitations of the study include small sample size, single geographical area, survey-based data collection, perception-based measurement of variables, and convenience non-random sampling.

10 Directions for Future Research

In the future, researchers can investigate the topic from a different perspective and with a bigger sample size drawn from a diverse geographical area. Before and after the measurement of perception towards the Kankor exam can also be an avenue of future research.

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