Comparison of Outcomes of Counselor-Led and Online Career Assessments

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Abstract

The proposed study will compare two different methods of career assessment interpretation to determine if there is any significant difference in student understanding of the career development process or their confidence engaging in career exploration. The first method is the traditional process that involves the student taking an assessment and having an in-person interpretation session with a trained career counselor. The second method involves a student taking an online career assessment and receiving a computer-generated text interpretation of the assessment results. A pre-test/post-test experiment will be conducted to measure differences between the methods. Similar results for both types of assessment interpretation would present an option for more cost-effective assessments and access to assessments for a greater number of students.

Comparison of Outcomes of Counselor-Led and Online Career Assessments

Career assessments are resource intensive for educational institutions to offer for students, but are valuable in helping students orient themselves in their career exploration or in making decisions about selection of major program of study. Assessments are a valuable component of the career development process, even for students that have aligned themselves with a major and vocational trajectory. Face-to-face assessment interpretations consume a minimum of an hour of counselor time, sometimes more, depending on the needs of the student. Online assessments, which provide a self-guided interpretation component, permit the student to explore their assessment results on their own. At this point it is unclear as to whether the online interpretation is as effective as an in-person interpretation led by a counselor. An effective online assessment interpretation would permit institutions to make assessments a normal component of a student's matriculation into the institution, such as by making it part of the first year orientation process.

There are several types of career assessments, most are classified as strengths, interests or personality assessments. In these categories of assessments there are also different approaches. Most take the form of being administered like a standardized test, either online or on paper. Traditionally after the assessment is scored the student will meet with a counselor that is trained in the interpretation of that particular assessment tool. The interpretation session gives the student the opportunity to have an interactive discussion about the results of their assessment, including to ask questions to clarify the implications of specific aspects of the result. This traditional method has multiple problems. The first is that it requires the presence of a trained counselor. Trained counselors are costly to institutions to maintain and may not have adequate

availability to individually meet with all of the students they are assigned (Hanson, Claiborn, & Kerr, 1997). Second, student engagement levels in face-to-face interpretation sessions have been determined to be variable, possibly making an in-person assessment not the best fit for all students (Swanson, et al., 2006). Finally, counselor-led sessions may not contribute to the self-efficacy of the student in the career exploration process, but instead create a dependence on the counselor as an arbiter of the assessment (Bullock-Yowell, Peterson, Wright, Reardon, & Mohn, 2011).

In recent years, as educational institutions have become more dependent on technological solutions to student engagement, fully online career assessments have emerged which provide students with a self-guided assessment instrument and interpretation (Gati & Asulin-Peretz, 2011). Many online assessments are drastically truncated versions of popular assessments developed more for entertainment value than their career development potential. A few assessments, such as PathwayU, have been developed specifically for the purpose of being an Internet-based replacement for traditional assessments (jobZology, 2017). While there is some variability in the quality and reliability of assessments available on the Internet, some have been found to be comparable to their traditional counterparts in terms of the instrument assessing what is intended (Herman, 2010).

There is presently limited research that directly compares the student outcomes for online career assessments to those that are interpreted by a trained counselor. The objective of this present study will be to determine if there is any significant difference between the levels of career exploration and feelings of career decision self-efficacy between undergraduate students who take a career assessment that is interpreted by a counselor and undergraduate students who take an online assessment and receive system-generated interpretation information.

Theoretical Framework

Modern career assessments are built upon the work of several psychologists, most notably Carl Jung, John Holland and Donald Clifton. The objective of the career assessment process is to provide the individual being assessed with a knowledge about themselves to be used in the process of making a vocational choice (Owens, Motl, & Krieshok, 2016). For undergraduate students the vocational choice may be the selection of a major field of study or the selection of a target industry.

Pesch, et. al (2018) claim that satisfaction with an academic major is related to the occupational knowledge a student has about their chosen field. A component that can intervene between a student's knowledge and their major satisfaction is their beliefs about their occupational knowledge. Career assessments can contribute to a student passing from their belief about the state of their own knowledge to becoming more fully self-aware and engaged in their career exploration (Pesch, Larson, & Seipel, 2018).

The administration of career assessments and the effectiveness of assessments has been researched by the field of vocational psychology since the origins of the field (Owens, Motl, & Krieshok, 2016). Introducing the Internet-based assessment component changes some of the assumptions and challenges the findings of the existing research. Further, generational changes in approaches to informational consumption and identify formation may contribute to differences in how students use knowledge gained through the career assessment interpretation process (Gati & Asulin-Peretz, 2011).

Previously the two modes of career assessment interpretation were information-giving and therapeutic assessment (Essig & Kelly, 2013). Therapeutic assessment is a counselor-led

interpretation strategy in which the counselor and the student discuss the results of the assessment and determine the implications for the student's career development. The information-giving technique involves the student receiving the assessment results and pertinent details, but being primarily responsible for determining how, if at all, the results will be used in their career development (Essig & Kelly, 2013). In a study comparing the impact of information giving and therapeutic assessment on career development, gains in vocational identity were significantly more positive for the therapeutic assessment group, while there was an equal increase in career self-efficacy for both groups (Essig & Kelly, 2013). It is unknown what component of the information giving technique caused the deficit in improvement to vocational identity, therefore it is possible that an appropriately robust Internet-based assessment interpretation will provide an experience that is a very close proxy for a therapeutic assessment session. It is promising that the career self-efficacy results were similar as this may indicate that dimension is only impacted by the presence of the information, not the method of delivery.

As vocational psychology has evolved, so have the number of instruments available for assessing career interests and strengths. Many of these instruments implement familiar themes, such as John Holland's RIASEC codes, but do so in a way that is inconsistent with the psychological research behind those themes. In one example, the O*NET Interest Profile Short Form, the occupational themes are applied and the assessment is generally consistent with Holland's research, but fails to hold validity due to problems with the construction of the questions and utilizing too few questions to produce a reliable result (Warlick, Ingram, Ternes, & Krieshok, 2018). Any Internet-based assessment instrument must conform to the same standards as their traditional counterparts and therefore be psychometrically valid. Ideally this would mean

that traditional assessments are adapted for Internet-based administration and then an interpretation component added, based upon the methods that career counselors are trained in.

Internet-based assessments have the potential to be in the information-giving category of interpretation, but because of the complexity that is possible with interactive feedback it is unclear if they suffer from the same types of limitations and lack of student engagement as the information giving techniques described by Essig and Kelly (2013). A potential problem with Internet-based assessment interpretation, even if it is interactive, is the lack of narrative exchange between the student and a career counselor. Software can conduct the assessment, provide the results and guide the student through an interpretive process which helps them associate their results with potential career paths and their own internalized interests, but it does not provide for reflection or nuanced guidance through a possible career path (McMahon & Watson, 2012). McMahon and Watson (2012) utilized a standard career assessment, Holland's Self-Directed Search, and then applied an Integrative Structured Interview as a compliment to the student's self-scoring of the assessment. The researchers found that students were able to draw more out of their assessment by having a narrative discussion guided by a career counselor than they were from the assessment results alone. Talking through the results allowed the students to more creatively invent their futures and examine how their assessment results are relevant to their life (McMahon & Watson, 2012).

Current literature addresses the benefits of career assessments and provides indicators of assessment effectiveness, but there is a gap in the literature in addressing how online assessment interpretation compares to face-to-face counselor-led interpretation methods. An examination of the possible differences in effectiveness is needed before career services professionals can advocate for a move to a fully Internet-based method of assessment.

Methods and Expected Findings

The proposed study will utilize an experimental design with a pre-test and post-test to measure the difference in career decision self-efficacy and career exploration between a face-to-face counselor led assessment interpretation and an online self-lead assessment interpretation. The experimental method used is modeled on the design utilized by Owens, et. al. (2016) to measure the differences between a strengths protocol and an interests protocol.

Participants

The population for this study will be first year and sophomore undergraduate students. For the purpose of this study the sample will be taken from students enrolled in various sections of a college transition seminar course at a large public research university. The cluster randomized assignment technique will be used to assign sections of the course to the conventional counselor-led interpretation method or the online interpretation method. Course enrollment averages between 20 and 25 students per section each semester, with about 30 sections of the course. For the purpose of this study eight sections taught by instructors who typically request the assistance of the career services office for a career component of their course will be utilized to implement these interventions. If at the time the study is implemented it is feasible to engage an additional two sections taught by instructors that do not normally include a career component, then a baseline control group that receives no intervention will be included. At the conclusion of the study all participants will be provided access to the online method and be provided with information on how to schedule an interpretation with a career counselor.

Procedure

The procedure for this study will involve a pre-test, assessment, interpretation and post-test. The pre-test will be administered during the first two weeks of a 15-week semester, followed soon after by the administration of the assessment and matching interpretation. Finally, the post-test will be administered between the 12th and 15th weeks of the semester to allow adequate time for exploration on the part of the students.

The pre-test and post-test will be composed of items from two different career engagement inventories, the Career Exploration Survey (Sumpf, Colarelli, & Hartman, 1982) and the Career Decision Self-Efficacy Scale inventory (Betz, Hammond, & Multon, 2005). The Career Exploration Survey items will determine if there is any change in the amount of time students have spent on career exploration tasks and their reaction to their exploration tasks. The Career Decision Self-Efficacy scale items will examine the changes in student beliefs about their ability to "successfully complete tasks necessary to making career decisions" (Betz, Hammond, & Multon, 2005, p. 132). Administering the combined test before and after the intervention will allow for the measurement of student growth on key career dimensions to determine the effect of each type of intervention.

The selection between a strengths or interests assessment for students who are early in their career decision process is a debated decision in vocational psychology at present and therefore the intervention will utilize an instrument that is capable of measuring multiple dimensions. In addition to resolving the conflict in selecting the best approach, a combined instrument is currently the prevailing direction in commercially available Internet-based assessment. For the purpose of this study the PathwayU (jobZology, 2017) assessment instrument will be used for both the online and counselor-led interpretation interventions.

Students enrolled in the sections of the course that will receive counselor-led interpretation will access a version of the assessment that has the online interpretation features turned off.

Students receiving online interpretation will be permitted to access the interpretation component at any point during the study, including immediately after the assessment has been taken, whereas the counselor-led group will receive an in-person interpretation after completing the assessment and will be provided methods for interacting with a career counselor after the initial interpretation. Students who receive an online interpretation will not be prohibited from seeking guidance from a career counselor, but with the cooperation of the career services office, those interactions will be tracked and reported with the outcomes of the study.

Verification of the completion of the online interpretation will be obtained from the PathwayU system based on its capability to track student interactions. The depth of the interactions cannot be tracked and would represent a measure outside the scope of this study, since the objective is to determine overall effectiveness. Face-to-face interpretations will be verified by the career services office utilizing the student's institution-assigned identification number. To ensure consistency in the face-to-face interpretations, counselors will be receive identical training in the interpretation of the assessment, however, some variance is expected due to the diverse backgrounds of the counseling professionals that may be involved.

Analysis

It is anticipated that a repeated measures analysis of variance test will be used to compare the pre and post-test results. The dependent variable will be the results of the career engagement inventories and the independent variable will be which interpretation method was used. The results of the individual assessments are not of interest to this particular analysis, but may be useful for a future study.

Expected Findings

It is expected that the career exploration and career decision self-efficacy of both experimental groups will increase at a similar rate for both the counselor-led and online protocols between the pre-test and post-test.

Significance and Implications

Career assessments are a source of information for students when making decisions or in enhancing their self-awareness. There are insufficient resources in most higher education institutions to provide every student with a one-on-one career assessment interpretation at key points in their development. If traditional interpretation methods can be supplemented or replaced by an Internet-based self-guided interpretation of career assessment results, then the assessments can be administered on a large scale such as being used as a mandatory component of changing majors.

Students change majors or decide on particular vocational trajectories for a variety of reasons including personal interest, perceived professional prestige and social pressures from parents and peers (Ma, 2009). While students may internalize any of these reasons, they may not necessarily lead the student to selecting a career path that is compatible with their own values, strengths or interests (Owens, Motl, & Krieshok, 2016). Consider a hypothetical undergraduate student who has been influenced by the social perception of STEM fields and has decided to pursue a degree in Civil Engineering. Presume the student has scored as having a high affinity for social and creative activities, but has relatively low affinity for organized tasks and concrete thinking. While these traits do not necessarily prevent the student from doing well in an engineering field, there is more risk to the student's career well-being if the student enters the

field being unaware of their own dispositions. Career assessments can give students information to make informed decisions that will benefit them long-term rather than relying on a decision made purely on a momentary passion.

Eliminating barriers to career assessments and making them more accessible to students will give more students the opportunity to benefit from the assessments and perhaps also lower the stigma of engaging with career counseling. The complication to moving to online assessment interpretation is in ensuring that the known positive impact of counselor-led interpretation is maintained. This study will provide insights into the differences in student outcomes between the two methods, enabling higher education leaders to decide if online career assessments will be a valuable change to their career counseling strategies.

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